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SEQUENCE LISTING

<110> Shimkets, Richard
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Miller, Charles
Boldog, Ferenc
Li, Li
Taupier Jr, Raymond J
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Smithson, Glennda
Zerhusen, Bryan
Liu, Xiaohong
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Edinger, Shlomit
Stone, David
Sciore, Paul
Millet, Isabelle
Rothenberg, Mark

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 Leu Asn Phe Ile His Pro Cys Phe Ala Val Cys Asn Cys Val His Gly
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 Val Cys Asn Ser Gly Leu Asp Gly Asp Gly Thr Cys Glu Cys Tyr Ser
 85 90 95
 Ala Tyr Thr Gly Pro Lys Cys Asp Lys Leu Thr Glu Asn Phe His Thr
 100 105 110
 Ser His Leu Thr Leu Trp Pro Val His Asp Ser Lys His Trp Gly Ser
 115 120 125
 Leu Arg His Gln Asn Met Asn Gly Thr Cys Ser Ser Gly Gly Gly Lys
 130 135 140
 Gly Asp Pro Asp Val Tyr Gln Asn Gly Leu Ile Phe His Gly Gly Gly
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 Thr Ser Gly Gly Leu Ser Ser Ser Arg Asn Arg Arg Ser Ser Val Lys
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 Arg Pro Glu Lys Trp Lys Gly Asp Asp Arg Asp Gly Gly Gly Lys Glu
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 Gly Gln Gln Arg Arg Arg Ala Asp Thr Glu Ser Ser Leu Gln Arg Gly
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 His Ile Lys Thr Pro Leu Pro His Arg Gln Gly Glu Ala Arg Ile Thr
 210 215 220

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 225 230 235 240
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 245 250 255
 Ser Phe Gln Thr His Ser Thr Ser Arg Leu Lys Glu Phe Glu Lys Gln
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 Leu Ser Pro Lys Thr Gln Gly His Gly Asp Asp Glu Gln Ala Leu Leu
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Ile	Glu 770	Ile	Thr	Ala	Lys	Asn 775	Gly	Arg	Ile	Tyr	Thr 780	Leu	Thr	Gly	Val	
Leu 785	Ile	Pro	Pro	Ser	Ile 790	Val	Pro	Ile	Leu	Pro 795	His	Arg	Cys	Asp	Glu 800	
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Tyr	Trp	Ser	Arg 820	Cys	Pro	Ala	Asn	Ser 825	Glu	Pro	Thr	Ala	Leu 830	Phe	Thr	
His	Arg	Cys 835	Val	Tyr	Ser	Gly	Arg 840	Phe	Gly	Ser	Leu	Lys 845	Ser	Gly	Cys	
Ala	Arg 850	Tyr	Cys	Asn	Ala	Thr 855	Val	Lys	Cys	Ala	Asp 860	Ser	Leu	Gly	Gly	
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 Ser Gly Arg Ile Leu Gln Asn Leu Thr Thr Leu Ala Thr Asn Asn Gly
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 Tyr Ile Lys Phe Ser Asn Leu Ile Gln Asp Ser Gly Leu Leu Ser Val
 1860 1865 1870
 Ile Thr Asp Pro Ile His Thr Pro Val Thr Leu Phe Trp Pro Thr Asp
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 1890 1895 1900

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 1955 1960 1965
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 1985 1990 1995 2000
 Thr Thr Phe Asp Ala Ser Gly Glu Cys Gly Ser Cys Val Asn Thr Pro
 2005 2010 2015
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Pro Gly Trp Thr Gly Ser Arg Cys His Thr Ala Val Cys Gln Ser Pro
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<213> Homo sapiens

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 Pro Gly Cys₁₁₅ Leu His Glu Glu Val₁₂₀ Pro Ala Val Gly Leu₁₂₅ Gly Ala Pro
 His Gly₁₃₀ Gln Ala Leu Val₁₃₅ Ser Gly Ala Gly Cys Ala₁₄₀ Leu Glu Pro Ser
 Tyr Val₁₄₅ Glu Ala Leu His₁₅₀ Ser Cys Leu Gln Ile₁₅₅ Leu Ile Ala Leu₁₆₀ Leu
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 <213> Homo sapiens

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 115 120 125
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 Glu Val Gly Val Met Asp Asn Thr Val Cys Gly Ser Phe Phe Gln Pro
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 Gln Tyr Pro Gly Gln Pro Ser Ser Ser Asp Tyr Thr Ile His Glu Asp
 165 170 175
 Met Leu Cys Ala Gly Asp Leu Ile Thr Gly Lys Ala Ile Cys Arg Arg
 180 185 190
 Asp Ser Arg Gly Pro Leu Val Cys Pro Leu Asn Gly Thr Trp Phe Leu
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 Met Gly Leu Ser Ser Trp Ser Leu Asp Cys Cys Ser Pro Val Gly Pro
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 Arg Val Phe Thr Arg Leu Pro Tyr Phe Thr Asn Trp Ile Ser Gln Lys
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 Lys Arg Glu Ser Thr Pro Pro Asp Pro Ala Leu Ala Pro Pro Gln Glu
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 Thr Pro Pro Ala Leu Asp Ser Met Thr Ser Gln Gly Ile Val His Lys
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 <212> PRT
 <213> Homo sapiens

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 85 90 95
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 Glu Gly Trp Lys Trp Gly Gly Cys Ser Ala Asp Ile Arg Tyr Gly Ile
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 225 230 235 240
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 245 250 255
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 275 280 285
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 290 295 300
 Asp Leu Met Cys Cys Gly Arg Gly Tyr Asn Thr His Gln Tyr Ala Arg
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Gly Lys Glu Leu Lys Val Gly Ser Arg Glu Ala Ala Phe Thr Tyr Ala
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His Arg Asp Glu Gly Trp Lys Trp Gly Gly Cys Ser Ala Asp Ile Arg
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Lys Ile Leu Glu Glu Asn Met Lys Leu Glu Cys Lys Cys His Gly Val
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 <212> DNA
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tctggagccc  aggatcacct  ggctgtgctg  cagaactgga  gaagagaagc  tcagcagaaa  2640
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<210> 24
 <211> 895
 <212> PRT
 <213> Homo sapiens

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 Gly His Ile Pro Gly Gln Pro Val Thr Pro His Trp Val Leu Asp Gly
 35 40 45
 Gln Pro Trp Arg Thr Val Ser Leu Glu Glu Pro Val Ser Lys Pro Asp
 50 55 60
 Met Gly Leu Val Ala Leu Glu Ala Glu Gly Gln Glu Leu Leu Leu Glu
 65 70 75 80
 Leu Glu Lys Asn His Arg Leu Leu Ala Pro Gly Tyr Ile Glu Thr His
 85 90 95

Tyr Gly Pro Asp Gly Gln Pro Val Val Leu Ala Pro Asn His Thr Asp
 100 105 110
 His Cys His Tyr Gln Gly Arg Val Arg Gly Phe Pro Asp Ser Trp Val
 115 120 125
 Val Leu Cys Thr Cys Ser Gly Met Ser Gly Leu Ile Thr Leu Ser Arg
 130 135 140
 Asn Ala Ser Tyr Tyr Leu Arg Pro Trp Pro Arg Gly Ser Lys Asp
 145 150 155 160
 Phe Ser Thr His Glu Ile Phe Arg Met Glu Gln Leu Leu Thr Trp Lys
 165 170 175
 Gly Thr Cys Gly His Arg Asp Pro Gly Asn Lys Ala Gly Met Thr Ser
 180 185 190
 Leu Pro Gly Gly Pro Gln Ser Arg Gly Arg Arg Glu Ala Arg Arg Thr
 195 200 205
 Arg Lys Tyr Leu Glu Leu Tyr Ile Val Ala Asp His Thr Leu Phe Leu
 210 215 220
 Thr Arg His Arg Asn Leu Asn His Thr Lys Gln Arg Leu Leu Glu Val
 225 230 235 240
 Ala Asn Tyr Val Asp Gln Leu Leu Arg Thr Leu Asp Ile Gln Val Ala
 245 250 255
 Leu Thr Gly Leu Glu Val Trp Thr Glu Arg Asp Arg Ser Arg Val Thr
 260 265 270
 Gln Asp Ala Asn Ala Thr Leu Trp Ala Phe Leu Gln Trp Arg Arg Gly
 275 280 285
 Leu Trp Ala Gln Arg Pro His Asp Ser Ala Gln Leu Leu Thr Gly Arg
 290 295 300
 Ala Phe Gln Gly Ala Thr Val Gly Leu Ala Pro Val Glu Gly Met Cys
 305 310 315 320
 Arg Ala Glu Ser Ser Gly Gly Val Ser Thr Asp His Ser Glu Leu Pro
 325 330 335
 Ile Gly Ala Ala Thr Met Ala His Glu Ile Gly His Ser Leu Gly
 340 345 350
 Leu Ser His Asp Pro Asp Gly Cys Cys Val Glu Ala Ala Ala Glu Ser
 355 360 365
 Gly Gly Cys Val Met Ala Ala Ala Thr Gly His Pro Phe Pro Arg Val
 370 375 380
 Phe Ser Ala Cys Ser Arg Arg Gln Leu Arg Ala Phe Phe Arg Lys Gly
 385 390 395 400
 Gly Gly Ala Cys Leu Ser Asn Ala Pro Asp Pro Gly Leu Pro Val Pro
 405 410 415
 Pro Ala Leu Cys Gly Asn Gly Phe Val Glu Ala Gly Glu Glu Cys Asp
 420 425 430

Cys Gly Pro Gly Gln Glu Cys Arg Asp Leu Cys Cys Phe Ala His Asn
 435 440 445
 Cys Ser Leu Arg Pro Gly Ala Gln Cys Ala His Gly Asp Cys Cys Val
 450 455 460
 Arg Cys Leu Leu Lys Pro Ala Gly Ala Leu Cys Arg Gln Ala Met Gly
 465 470 475 480
 Asp Cys Asp Leu Pro Glu Phe Cys Thr Gly Thr Ser Ser His Cys Pro
 485 490 495
 Pro Asp Val Tyr Leu Leu Asp Gly Ser Pro Cys Ala Lys Gly Ser Gly
 500 505 510
 Tyr Cys Trp Asp Gly Ala Cys Pro Thr Leu Glu Gln Gln Cys Gln Gln
 515 520 525
 Leu Trp Gly Pro Gly Ser His Pro Ala Pro Glu Ala Cys Phe Gln Val
 530 535 540
 Val Asn Ser Ala Gly Asp Ala His Gly Asn Cys Gly Gln Asp Ser Glu
 545 550 555 560
 Gly His Phe Leu Pro Cys Ala Gly Arg Asp Ala Leu Cys Gly Lys Leu
 565 570 575
 Gln Cys Gln Gly Gly Lys Pro Ser Leu Leu Ala Pro His Met Val Pro
 580 585 590
 Val Asp Ser Thr Val His Leu Asp Gly Gln Glu Val Thr Cys Arg Gly
 595 600 605
 Ala Leu Ala Leu Pro Ser Ala Gln Leu Asp Leu Leu Gly Leu Gly Leu
 610 615 620
 Val Glu Pro Gly Thr Gln Cys Gly Pro Arg Met Val Cys Gln Ser Arg
 625 630 635 640
 Arg Cys Arg Lys Asn Ala Phe Gln Glu Leu Gln Arg Cys Leu Thr Ala
 645 650 655
 Cys His Ser His Gly Val Cys Asn Ser Asn His Asn Cys His Cys Ala
 660 665 670
 Pro Gly Trp Ala Pro Pro Phe Cys Asp Lys Pro Gly Phe Gly Gly Ser
 675 680 685
 Met Asp Ser Gly Pro Val Gln Ala Glu Asn His Asp Thr Phe Leu Leu
 690 695 700
 Ala Met Leu Leu Ser Val Leu Leu Pro Leu Leu Pro Gly Ala Gly Leu
 705 710 715 720
 Ala Trp Cys Cys Tyr Arg Leu Pro Gly Ala His Leu Gln Arg Cys Ser
 725 730 735
 Trp Gly Cys Arg Arg Asp Pro Ala Cys Ser Gly Pro Lys Asp Gly Pro
 740 745 750
 His Arg Asp His Pro Leu Gly Gly Val His Pro Met Glu Leu Gly Pro
 755 760 765

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Thr Ala Thr Gly Gln Pro Trp Pro Leu Asp Pro Glu Asn Ser His Glu
 770 775 780
 Pro Ser Ser His Pro Glu Lys Pro Leu Pro Ala Val Ser Pro Asp Pro
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 Gln Gly Gly Ser Leu Ala Ala Trp Gly Pro Ser Pro Leu Gly Asp Asn
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 Ile Ser Ser Ser Phe Ser Ala Asp Gln Val Gln Met Pro Arg Ser Cys
 820 825 830
 Leu Cys Gly Glu Pro Trp Gly Gly His Val Gly Arg Lys Glu Gly Ser
 835 840 845
 Lys Arg Gly Gly Pro Arg Leu Gly Glu Arg Pro Val Trp Ser Pro Gly
 850 855 860
 Ser Pro Gly Cys Ala Ala Glu Leu Glu Lys Arg Ser Ser Ala Glu Arg
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 <211> 2642
 <212> DNA
 <213> Homo sapiens

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 tcaccccgcg ctgggtcctg gatggacaac cctggcgcac cgtcagcctg gaggagccgg 180
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 taaggggctt ccccgactcc tgggtagtcc tctgcacctg ctctgggatg agtggcctga 420
 tcaccctcag caggaatgcc agctattatc tgcgtccctg gccaccccgg ggctccaagg 480
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 gccacagggg tcctgggaac aaagcgggca tgaccagcct tcctgggtgg cccagagca 600
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<210> 26
 <211> 874
 <212> PRT
 <213> Homo sapiens

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      20          25          30
Gly His Ile Pro Gly Gln Pro Val Thr Pro His Trp Val Leu Asp Gly
      35          40          45
Gln Pro Trp Arg Thr Val Ser Leu Glu Glu Pro Val Ser Lys Pro Asp
      50          55          60
Met Gly Leu Val Ala Leu Glu Ala Glu Gly Gln Glu Leu Leu Leu Glu
      65          70          75          80
Leu Glu Lys Asn His Arg Leu Leu Ala Pro Gly Tyr Ile Glu Thr His
      85          90          95
Tyr Gly Pro Asp Gly Gln Pro Val Val Leu Ala Pro Asn His Thr Asp
      100          105          110
His Cys His Tyr Gln Gly Arg Val Arg Gly Phe Pro Asp Ser Trp Val
      115          120          125
Val Leu Cys Thr Cys Ser Gly Met Ser Gly Leu Ile Thr Leu Ser Arg
      130          135          140
Asn Ala Ser Tyr Tyr Leu Arg Pro Trp Pro Pro Arg Gly Ser Lys Asp
      145          150          155          160
Phe Ser Thr His Glu Ile Phe Arg Met Glu Gln Leu Leu Thr Trp Lys
      165          170          175
Gly Thr Cys Gly His Arg Asp Pro Gly Asn Lys Ala Gly Met Thr Ser
      180          185          190
Leu Pro Gly Gly Pro Gln Ser Arg Gly Arg Arg Glu Ala Arg Arg Thr
      195          200          205
Arg Lys Tyr Leu Glu Leu Tyr Ile Val Ala Asp His Thr Leu Phe Leu
      210          215          220

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Thr	Arg	His	Arg	Asn	Leu	Asn	His	Thr	Lys	Gln	Arg	Leu	Leu	Glu	Val
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Leu	Thr	Gly	Leu	Glu	Val	Trp	Thr	Glu	Arg	Asp	Arg	Ser	Arg	Val	Thr
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Gln	Asp	Ala	Asn	Ala	Thr	Leu	Trp	Ala	Phe	Leu	Gln	Trp	Arg	Arg	Gly
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Leu	Trp	Ala	Gln	Arg	Pro	His	Asp	Ser	Ala	Gln	Leu	Leu	Thr	Gly	Arg
	290					295					300				
Ala	Phe	Gln	Gly	Ala	Thr	Val	Gly	Leu	Ala	Pro	Val	Glu	Gly	Met	Cys
305					310					315					320
Arg	Ala	Glu	Ser	Ser	Gly	Gly	Val	Ser	Thr	Asp	His	Ser	Glu	Leu	Pro
				325					330					335	
Ile	Gly	Ala	Ala	Ala	Thr	Met	Ala	His	Glu	Ile	Gly	His	Ser	Leu	Gly
			340					345					350		
Leu	Ser	His	Asp	Pro	Asp	Gly	Cys	Cys	Val	Glu	Ala	Ala	Ala	Glu	Ser
		355					360					365			
Gly	Gly	Cys	Val	Met	Ala	Ala	Ala	Thr	Gly	His	Pro	Phe	Pro	Arg	Val
	370					375					380				
Phe	Ser	Ala	Cys	Ser	Arg	Arg	Gln	Leu	Arg	Ala	Phe	Phe	Arg	Lys	Gly
385					390					395					400
Gly	Gly	Ala	Cys	Leu	Ser	Asn	Ala	Pro	Asp	Pro	Gly	Leu	Pro	Val	Pro
				405					410					415	
Pro	Ala	Leu	Cys	Gly	Asn	Gly	Phe	Val	Glu	Ala	Gly	Glu	Glu	Cys	Asp
			420					425					430		
Cys	Gly	Pro	Gly	Gln	Glu	Cys	Arg	Asp	Leu	Cys	Cys	Phe	Ala	His	Asn
		435					440					445			
Cys	Ser	Leu	Arg	Pro	Gly	Ala	Gln	Cys	Ala	His	Gly	Asp	Cys	Cys	Val
	450					455					460				
Arg	Cys	Leu	Leu	Lys	Pro	Ala	Gly	Ala	Leu	Cys	Arg	Gln	Ala	Met	Gly
465					470					475					480
Asp	Cys	Asp	Leu	Pro	Glu	Phe	Cys	Thr	Gly	Thr	Ser	Ser	His	Cys	Pro
				485					490					495	
Pro	Asp	Val	Tyr	Leu	Leu	Asp	Gly	Ser	Pro	Cys	Ala	Lys	Gly	Ser	Gly
			500					505					510		
Tyr	Cys	Trp	Asp	Gly	Ala	Cys	Pro	Thr	Leu	Glu	Gln	Gln	Cys	Gln	Gln
		515					520					525			
Leu	Trp	Gly	Pro	Gly	Ser	His	Pro	Ala	Pro	Glu	Ala	Cys	Phe	Gln	Val
	530					535					540				
Val	Asn	Ser	Ala	Gly	Asp	Ala	His	Gly	Asn	Cys	Gly	Gln	Asp	Ser	Glu
545					550					555					560

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Gly His Phe Leu Pro Cys Ala Gly Arg Asp Ala Leu Cys Gly Lys Leu
 565 570
 Gln Cys Gln Gly Gly Lys Pro Ser Leu Leu Ala Pro His Met Val Pro
 580 585 590
 Val Asp Ser Thr Val His Leu Asp Gly Gln Glu Val Thr Cys Arg Gly
 595 600 605
 Ala Leu Ala Leu Pro Ser Ala Gln Leu Asp Leu Leu Gly Leu Gly Leu
 610 615 620
 Val Glu Pro Gly Thr Gln Cys Gly Pro Arg Met Val Cys Gln Ser Arg
 625 630 635 640
 Arg Cys Arg Lys Asn Ala Phe Gln Glu Leu Gln Arg Cys Leu Thr Ala
 645 650 655
 Cys His Ser His Gly Val Cys Asn Ser Asn His Asn Cys His Cys Ala
 660 665 670
 Pro Gly Trp Ala Pro Pro Phe Cys Asp Lys Pro Gly Phe Gly Gly Ser
 675 680 685
 Met Asp Ser Gly Pro Val Gln Ala Glu Asn His Asp Thr Phe Leu Leu
 690 695 700
 Ala Met Leu Leu Ser Val Leu Leu Pro Leu Leu Pro Gly Ala Gly Leu
 705 710 715 720
 Ala Trp Cys Cys Tyr Arg Leu Pro Gly Ala His Leu Gln Arg Cys Ser
 725 730 735
 Trp Gly Cys Arg Arg Asp Pro Ala Cys Ser Gly Pro Lys Asp Gly Pro
 740 745 750
 His Arg Asp His Pro Leu Gly Gly Val His Pro Met Glu Leu Gly Pro
 755 760 765
 Thr Ala Thr Gly Gln Pro Trp Pro Leu Asp Pro Glu Asn Ser His Glu
 770 775 780
 Pro Ser Ser His Pro Glu Lys Pro Leu Pro Ala Val Ser Pro Asp Pro
 785 790 795 800
 Gln Ala Asp Gln Val Gln Met Pro Arg Ser Cys Leu Cys Gly Glu Pro
 805 810 815
 Trp Gly Gly His Val Gly Arg Lys Glu Gly Ser Lys Arg Gly Gly Pro
 820 825 830
 Arg Leu Gly Glu Arg Pro Val Trp Ser Pro Gly Ser Pro Gly Cys Ala
 835 840 845
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 Asn Ser Arg Lys Ala Gly Gly Thr Gln Lys
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<210> 27
 <211> 1307

<212> DNA

<213> Homo sapiens

<400> 27

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cctatttgat ttccagaggg atattgaggg ccgagtagtg gagaatattt caaaacgatg 240
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<210> 28

<211> 422

<212> PRT

<213> Homo sapiens

<400> 28

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 20             25             30

Arg Cys Ala Gln Val Ser Arg Ala Trp Asn Val Leu Ala Leu Asp Gly
 35             40             45

Ser Asn Trp Gln Arg Ile Asp Leu Phe Asp Phe Gln Arg Asp Ile Glu
 50             55             60

Gly Arg Val Val Glu Asn Ile Ser Lys Arg Cys Gly Gly Phe Leu Arg
 65             70             75             80

Lys Leu Ser Leu Arg Gly Cys Leu Gly Val Gly Asp Asn Ala Leu Arg
 85             90             95

Thr Phe Ala Gln Asn Cys Arg Asn Ile Glu Val Leu Asn Leu Asn Gly
100             105             110

Cys Thr Lys Thr Ile Asp Ala Thr Cys Thr Ser Leu Ser Lys Phe Cys
115             120             125

Ser Lys Leu Arg His Leu Asp Leu Ala Ser Cys Thr Ser Ile Thr Asn
130             135             140

Met Pro Leu Lys Ala Leu Ser Glu Gly Cys Pro Leu Leu Glu Gln Leu
145             150             155             160

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Asn Ile Ser Trp Cys₁₆₅ Asp Gln Val Thr Lys₁₇₀ Asp Gly Ile Gln Ala₁₇₅ Leu
 Val Arg Gly Cys₁₈₀ Gly Gly Leu Lys Ala₁₈₅ Leu Phe Leu Lys Gly₁₉₀ Cys Thr
 Gln Leu Glu₁₉₅ Asp Glu Ala Leu Lys₂₀₀ Tyr Ile Gly Ala His₂₀₅ Cys Pro Glu
 Leu Val₂₁₀ Thr Leu Asn Leu Gln₂₁₅ Thr Cys Leu Gln Ile₂₂₀ Thr Asp Glu Gly
 Leu₂₂₅ Ile Thr Ile Cys₂₃₀ Arg Gly Cys His Lys₂₃₅ Leu Gln Ser Leu Cys Ala₂₄₀
 Ser Gly Cys Ser Asn₂₄₅ Ile Thr Asp Ala Ile₂₅₀ Leu Asn Ala Leu Gly₂₅₅ Gln
 Asn Cys Pro Arg₂₆₀ Leu Arg Ile Leu Glu₂₆₅ Val Ala Arg Cys Ser₂₇₀ Gln Leu
 Thr Asp Val₂₇₅ Gly Phe Thr Thr Leu₂₈₀ Ala Arg Asn Cys His₂₈₅ Glu Leu Glu
 Lys Met₂₉₀ Asp Leu Glu Glu Cys₂₉₅ Val Gln Ile Thr Asp₃₀₀ Ser Thr Leu Ile
 Gln₃₀₅ Leu Ser Ile His Cys₃₁₀ Pro Arg Leu Gln Val₃₁₅ Leu Ser Leu Ser His₃₂₀
 Cys Glu Leu Ile Thr₃₂₅ Asp Asp Gly Ile Arg₃₃₀ His Leu Gly Asn Gly₃₃₅ Ala
 Cys Ala His Asp₃₄₀ Gln Leu Glu Val Ile₃₄₅ Glu Leu Asp Asn Cys₃₅₀ Pro Leu
 Ile Thr Asp₃₅₅ Ala Ser Leu Glu His₃₆₀ Leu Lys Ser Cys His₃₆₅ Ser Leu Glu
 Arg Ile₃₇₀ Glu Leu Tyr Asp Cys₃₇₅ Gln Gln Ile Thr Arg₃₈₀ Ala Gly Ile Lys
 Arg₃₈₅ Leu Arg Thr His Leu₃₉₀ Pro Asn Ile Lys Val₃₉₅ His Ala Tyr Phe Ala₄₀₀
 Pro Val Thr Pro₄₀₅ Pro Ser Val Gly Gly₄₁₀ Ser Arg Gln Arg Phe₄₁₅ Cys
 Arg Cys Cys Ile₄₂₀ Leu

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 <211> 499
 <212> DNA
 <213> Homo sapiens

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 ttggcagtga agggagtggg gcttgatgtc acctctggaa aggggtttta tggacaaaga 180
 gccccctaca atgccttgac caggaaggac tctgctagag gggtagccaa ggtgtccttg 240

CURA2221.APP

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acaattctca atgagtttgg cagccccaac ctggacttca aggctgaaga ccagcccctt 420
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ggtaggaaga cattccagc

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<210> 30
 <211> 141
 <212> PRT
 <213> Homo sapiens

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<400> 30
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          20          25          30
Ile Tyr Leu Ala Val Lys Gly Val Gly Leu Asp Val Thr Ser Gly Lys
          35          40          45
Gly Phe Tyr Gly Gln Arg Ala Pro Tyr Asn Ala Leu Thr Arg Lys Asp
          50          55          60
Ser Ala Arg Gly Val Ala Lys Val Ser Leu Asp His Val Asp Leu Thr
          65          70          75          80
Cys Asp Thr Thr Gly Leu Ile Ala Lys Lys Leu Glu Ser Met Asp Asp
          85          90          95
Val Phe Thr Ser Val Tyr Lys Ala Lys His Pro Ile Val Ser Tyr Arg
          100          105          110
Ala Gln Thr Ile Leu Asn Glu Phe Gly Ser Pro Asn Leu Asp Phe Lys
          115          120          125
Ala Glu Asp Gln Pro Leu Phe Asp Lys Lys Glu Gly Phe
          130          135          140

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<210> 31
 <211> 1831
 <212> DNA
 <213> Homo sapiens

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 Tyr Phe Thr Gln Leu Ser Glu Asp Lys Leu Trp Asp Ile Ile Asn Val
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 Leu Asp His Phe Ser Arg Ala Leu Gln Tyr Glu Tyr Ala Ser Lys Gly
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<213> Homo sapiens
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Trp	Val	Pro 35	Ser	Asp	Lys	Ser	Gly 40	Phe	Glu	Pro	Ala	Ser 45	Leu	Lys	Glu
Glu	Val 50	Gly	Glu	Glu	Ala	Ile 55	Val	Glu	Leu	Val	Glu 60	Asn	Gly	Lys	Lys
Val 65	Lys	Val	Asn	Lys	Asp 70	Asp	Ile	Gln	Lys	Met 75	Asn	Pro	Pro	Lys	Phe 80
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Val	Leu	His	Asn 100	Leu	Lys	Glu	Arg	Tyr 105	Tyr	Ser	Gly	Leu	Ile 110	Tyr	Thr
Tyr	Ser	Gly 115	Leu	Phe	Cys	Val	Val 120	Ile	Asn	Pro	Tyr	Lys 125	Asn	Leu	Pro
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Glu 145	Met	Pro	Pro	His	Ile 150	Tyr	Ala	Ile	Thr	Asp 155	Thr	Ala	Tyr	Arg	Ser 160
Met	Met	Gln	Asp	Arg 165	Glu	Asp	Gln	Ser	Ile 170	Leu	Cys	Thr	Gly	Glu 175	Ser
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Tyr	Val	Ala 195	Ser	Ser	His	Lys	Ser 200	Lys	Lys	Asp	Gln	Gly 205	Glu	Leu	Glu
Arg	Gln 210	Leu	Leu	Gln	Ala	Asn 215	Pro	Ile	Leu	Glu	Ala 220	Phe	Gly	Asn	Ala
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Tyr	Leu	Leu	Glu 260	Lys	Ser	Arg	Ala	Ile 265	Arg	Gln	Ala	Lys	Glu 270	Glu	Arg
Thr	Phe	His 275	Ile	Phe	Tyr	Tyr	Leu 280	Leu	Ser	Gly	Ala	Gly 285	Glu	His	Leu
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 Glu Thr Met Glu Ala Met Arg Ile Met Gly Ile Pro Glu Glu Glu Gln
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 Phe Thr Arg Gly Ile Leu Thr Pro Arg Ile Lys Val Gly Arg Asp Tyr
 385 390 395 400
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 Gly Ile Leu Asp Ile Ala Gly Phe Glu Ile Phe Asp Leu Asn Ser Phe
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 Glu Gln Leu Cys Ile Asn Tyr Thr Asn Glu Lys Leu Gln Gln Leu Phe
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 Val Asp Tyr Lys Ala Asp Glu Trp Leu Met Lys Asn Met Asp Pro Leu
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 Ser Glu Leu Trp Lys Asp Val Asp Arg Ile Ile Gly Leu Asp Gln Val
 610 615 620
 Ala Gly Met Ser Glu Thr Ala Leu Pro Gly Ala Phe Lys Thr Arg Lys
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Ile	Pro	Asn	His	Glu	Lys	Lys	Ala	Gly	Lys	Leu	Asp	Pro	His	Leu	Val		
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Ala	Lys	Glu	Glu	Glu	Leu	Val	Lys	Val	Arg	Glu	Lys	Gln	Leu	Ala	Ala		
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Glu	Lys	Leu	Gln	Leu	Gln	Glu	Gln	Leu	Gln	Ala	Glu	Thr	Glu	Leu	Cys		
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 Thr Lys Leu Lys Gln Val Glu Asp Glu Lys Asn Ser Phe Arg Glu Gln
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 85 90 95
 Tyr Val Trp Ile Gly Leu His Asp Pro Thr Gln Gly Thr Glu Pro Asn
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 225 230 235 240
 Pro Ile Val Ile Ser Val Ser Gln Ser Thr Val Tyr Ile Asn Asn Lys
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 Ala Lys Ile Ile Ser Ser Asp Ile Ile Ser Thr Asn Gly Ile Val His
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 Asp Asn Ser Gly Arg Ile Leu Gln Asn Leu Thr Thr Leu Ala Thr Asn
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 Asn Gly Tyr Ile Lys Phe Ser Asn Leu Ile Gln Asp Ser Gly Leu Leu
 305 310 315 320
 Ser Val Ile Thr Asp Pro Ile His Thr Pro Val Thr Leu Phe Trp Pro
 325 330 335

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Phe	Asn	Gln	Asp	Asn	Lys	Asp	Lys	Leu	Lys	Glu	Tyr	Leu	Lys	Phe	His
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Val	Ile	Arg	Asp	Ala	Lys	Val	Leu	Ala	Val	Asp	Leu	Pro	Thr	Ser	Thr
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Ala	Trp	Lys	Thr	Leu	Gln	Gly	Ser	Glu	Leu	Ser	Val	Lys	Cys	Gly	Ala
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Gly	Arg	Asp	Ile	Gly	Asp	Leu	Phe	Leu	Asn	Gly	Gln	Thr	Cys	Arg	Ile
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Val	Gln	Arg	Glu	Leu	Leu	Phe	Asp	Leu	Gly	Val	Ala	Tyr	Gly	Ile	Asp
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Cys	Leu	Leu	Ile	Asp	Pro	Thr	Leu	Gly	Gly	Arg	Cys	Asp	Thr	Phe	Thr
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Val	Cys	Leu	Asp	Gln	Tyr	Ser	Ala	Thr	Gly	Glu	Cys	Lys	Cys	Asn	Thr
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Gly	Ile	Thr	Gly	Ser	Gly	Gln	Cys	Leu	Cys	Glu	Thr	Gly	Trp	Thr	Gly
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Lys	Gln	Asp	Asn	Gly	Gly	Cys	Ala	Lys	Val	Ala	Arg	Cys	Ser	Gln	Lys
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Gly	Thr	Lys	Val	Ser	Cys	Ser	Cys	Gln	Lys	Gly	Tyr	Lys	Gly	Asp	Gly
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Cys 705	Glu	Cys	Lys	Ser	His 710	Tyr	Val	Gly	Asp	Gly 715	Leu	Asn	Cys	Glu	Pro 720
Glu	Gln	Leu	Pro	Ile 725	Asp	Arg	Cys	Leu	Gln 730	Asp	Asn	Gly	Gln	Cys 735	His
Ala	Asp	Ala	Lys 740	Cys	Val	Asp	Leu	His 745	Phe	Gln	Asp	Thr	Thr	Val	Gly
Val	Phe	His 755	Leu	Arg	Ser	Pro	Leu 760	Gly	Gln	Tyr	Lys	Leu 765	Thr	Phe	Asp
Lys	Ala 770	Arg	Glu	Ala	Cys	Ala 775	Asn	Glu	Ala	Ala	Thr 780	Met	Ala	Thr	Tyr
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Gly	Trp	Leu	Glu	Thr 805	Gly	Arg	Val	Ala	Tyr 810	Pro	Thr	Ala	Phe	Ala 815	Ser
Gln	Asn	Cys	Gly 820	Ser	Gly	Val	Val	Gly 825	Ile	Val	Asp	Tyr	Gly 830	Pro	Arg
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Ser	Ala 850	Gly	Leu	Phe	Gln	Gln 855	Leu	Ser	Ser	Arg	Pro 860	Cys	Ile	Ser	Arg
Thr 865	Pro	Asp	Asp	Leu	Ser 870	Ile	Arg	Gly	Thr	Leu 875	Phe	Val	Pro	Gln	Asn 880
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Gln Gly Pro Leu Gly Asp Gly Ser Cys Asp Cys Asp Val Gly Trp Arg
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Gly Val His Cys Asp Asn Ala Thr Thr Glu Asp Asn Cys Asn Gly Thr
 65 70 75 80

Cys His Thr Ser Ala Asn Cys Leu Thr Asn Ser Asp Gly Thr Ala Ser
 85 90 95

Cys Lys Cys Ala Ala Gly Phe Gln Gly Asn Gly Thr Ile Cys Thr Ala
 100 105 110

Ile Asn Ala Cys Glu Ile Ser Asn Gly Gly Cys Ser Ala Lys Ala Asp
 115 120 125

Cys Lys Arg Thr Thr Pro Gly Arg Arg Val Cys Thr Cys Lys Ala Gly
 130 135 140

Tyr Thr Gly Asp Gly Ile Val Cys Leu Glu Ile Asn Pro Cys Leu Glu
 145 150 155 160

Asn His Gly Gly Cys Asp Lys Asn Ala Glu Cys Thr Gln Thr Gly Pro
 165 170 175

Asn Gln Ala Ala Cys Asn Cys Leu Pro Ala Tyr Thr Gly Asp Gly Lys
 180 185 190

Val Cys Thr Leu Ile Asn Val Cys Leu Thr Lys Asn Gly Gly Cys Ser
 195 200 205

Glu Phe Ala Ile Cys Asn His Thr Gly Gln Val Glu Arg Thr Cys Thr
 210 215 220

Cys Lys Pro Asn Tyr Ile Gly Asp Gly Phe Thr Cys Arg Gly Ser Ile
 225 230 235 240

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Tyr Gln Glu Leu Pro Lys Asn Pro Lys Thr Ser Gln Tyr Phe Phe Gln
 245 250 255
 Leu Gln Glu His Phe Val Lys Asp Leu Val Gly Pro Gly Pro Phe Thr
 260 265 270
 Val Phe Ala Pro Leu Ser Ala Ala Phe Asp Glu Glu Ala Arg Val Lys
 275 280 285
 Asp Trp Asp Lys Tyr Gly Leu Met Pro Gln Val Leu Arg Tyr His Val
 290 295 300
 Val Ala Cys His Gln Leu Leu Leu Glu Asn Leu Lys Leu Ile Ser Asn
 305 310 315 320
 Ala Thr Ser Leu Gln Gly Glu Pro Ile Val Ile Ser Val Ser Gln Ser
 325 330 335
 Thr Val Tyr Ile Asn Asn Lys Ala Lys Ile Ile Ser Ser Asp Ile Ile
 340 345 350
 Ser Thr Asn Gly Ile Val His Ile Ile Asp Lys Leu Leu Ser Pro Lys
 355 360 365
 Asn Leu Ile Thr Pro Lys Asp Asn Ser Gly Arg Ile Leu Gln Asn
 370 375 380
 Leu Thr Thr Leu Ala Thr Asn Asn Gly Tyr Ile Lys Phe Ser Asn Leu
 385 390 395 400
 Ile Gln Asp Ser Gly Leu Leu Ser Val Ile Thr Asp Pro Ile His Thr
 405 410 415
 Pro Val Thr Leu Phe Trp Pro Thr Asp Gln Ala Leu His Ala Leu Pro
 420 425 430
 Ala Glu Gln Gln Asp Phe Leu Phe Asn Gln Asp Asn Lys Asp Lys Leu
 435 440 445
 Lys Glu Tyr Leu Lys Phe His Val Ile Arg Asp Ala Lys Val Leu Ala
 450 455 460
 Val Asp Leu Pro Thr Ser Thr Ala Trp Lys Thr Leu Gln Gly Ser Glu
 465 470 475 480
 Leu Ser Val Lys Cys Gly Ala Gly Arg Asp Ile Gly Asp Leu Phe Leu
 485 490 495
 Asn Gly Gln Thr Cys Arg Ile Val Gln Arg Glu Leu Leu Phe Asp Leu
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 Gly Val Ala Tyr Gly Ile Asp Cys Leu Leu Ile Asp Pro Thr Leu Gly
 515 520 525
 Gly Arg Cys Asp Thr Phe Thr Thr Phe Asp Ala Ser Gly Glu Cys Gly
 530 535 540
 Ser Cys Val Asn Thr Pro Ser Cys Pro Arg Trp Ser Lys Pro Lys Gly
 545 550 555 560
 Val Lys Gln Lys Cys Leu Tyr Asn Leu Pro Phe Lys Arg Asn Leu Glu
 565 570 575

Gly Cys Arg Glu Arg Cys Ser Leu Val Ile Gln Ile Pro Arg Cys Cys
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 Lys Gly Tyr Phe Gly Arg Asp Cys Gln Ala Cys Pro Gly Gly Pro Asp
 595 600 605
 Ala Pro Cys Asn Asn Arg Gly Val Cys Leu Asp Gln Tyr Ser Ala Thr
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 625 630 635 640
 Cys Trp Pro Gly Arg Phe Gly Pro Asp Cys Leu Pro Cys Gly Cys Ser
 645 650 655
 Asp His Gly Gln Cys Asp Asp Gly Ile Thr Gly Ser Gly Gln Cys Leu
 660 665 670
 Cys Glu Thr Gly Trp Thr Gly Pro Ser Cys Asp Thr Gln Ala Val Leu
 675 680 685
 Pro Ala Val Cys Thr Pro Pro Cys Ser Ala His Ala Thr Cys Lys Glu
 690 695 700
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 705 710 715 720
 Cys Thr Val Val Asp Phe Cys Lys Gln Asp Asn Gly Gly Cys Ala Lys
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 Val Ala Arg Cys Ser Gln Lys Gly Thr Lys Val Ser Cys Ser Cys Gln
 740 745 750
 Lys Gly Tyr Lys Gly Asp Gly His Ser Cys Thr Glu Ile Asp Pro Cys
 755 760 765
 Ala Asp Gly Leu Asn Gly Gly Cys His Glu His Ala Thr Cys Lys Met
 770 775 780
 Thr Gly Pro Gly Lys His Lys Cys Glu Cys Lys Ser His Tyr Val Gly
 785 790 795 800
 Asp Gly Leu Asn Cys Glu Pro Glu Gln Leu Pro Ile Asp Arg Cys Leu
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 Gln Asp Asn Gly Gln Cys His Ala Asp Ala Lys Cys Val Asp Leu His
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 Phe Gln Asp Thr Thr Val Gly Val Phe His Leu Arg Ser Pro Leu Gly
 835 840 845
 Gln Tyr Lys Leu Thr Phe Asp Lys Ala Arg Glu Ala Cys Ala Asn Glu
 850 855 860
 Ala Ala Thr Met Ala Thr Tyr Asn Gln Leu Ser Tyr Ala Gln Lys Ala
 865 870 875 880
 Lys Tyr His Leu Cys Ser Ala Gly Trp Leu Glu Thr Gly Arg Val Ala
 885 890 895
 Tyr Pro Thr Ala Phe Ala Ser Gln Asn Cys Gly Ser Gly Val Val Gly
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Ile Val Asp Tyr Gly Pro Arg Pro Asn Lys Ser Glu Met Trp Asp Val
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 Phe Cys Tyr Arg Met Lys Asp Val Asn Cys Thr Cys Lys Val Gly Tyr
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 Ser Phe Pro Ser Leu Thr Asn Phe Leu Thr Glu Val Leu Ala Tyr Ser
 965 970 975
 Asn Ser Ser Ala Arg Gly Arg Ala Phe Leu Glu His Leu Thr Asp Leu
 980 985 990
 Ser Ile Arg Gly Thr Leu Phe Val Pro Gln Asn Ser Gly Leu Gly Glu
 995 1000 1005
 Asn Glu Thr Leu Ser Gly Arg Asp Ile Glu His His Leu Ala Asn Val
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 Ser Met Phe Phe Tyr Asn Asp Leu Val Asn Gly Thr Thr Leu Gln Thr
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 Arg Leu Gly Ser Lys Leu Leu Ile Thr Ala Ser Gln Asp Pro Leu Gln
 1045 1050 1055
 Pro Thr Glu Thr Arg Phe Val Asp Gly Arg Ala Ile Leu Gln Trp Asp
 1060 1065 1070
 Ile Phe Ala Ser Asn Gly Ile Ile His Val Ile Ser Arg Pro Leu Lys
 1075 1080 1085
 Ala Pro Pro Ala Pro Val Thr Leu Thr His Thr Gly Leu Gly Ala Gly
 1090 1095 1100
 Ile Phe Phe Ala Ile Ile Leu Val Thr Gly Ala Val Ala Leu Ala Ala
 1105 1110 1115 1120
 Tyr Ser Tyr Phe Arg Ile Asn Arg Arg Thr Ile Gly Phe Gln His Phe
 1125 1130 1135
 Glu Ser Glu Glu Asp Ile Asn Val Ala Ala Leu Gly Lys Gln Gln Pro
 1140 1145 1150
 Glu Asn Ile Ser Asn Pro Leu Tyr Glu Ser Thr Thr Ser Ala Pro Pro
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 1170 1175 1180
 Gly Asn Asp Pro Leu Arg Thr Leu
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 Page 94

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 Pro Ile Val Ile Ser Val Ser Gln Ser Thr Val Tyr Ile Asn Asn Lys
 35 40 45
 Ala Lys Ile Ile Ser Ser Asp Ile Ile Ser Thr Asn Gly Ile Val His
 50 55 60
 Ile Ile Asp Lys Leu Leu Ser Pro Lys Asn Leu Leu Ile Thr Pro Lys
 65 70 75 80
 Asp Asn Ser Gly Arg Ile Leu Gln Asn Leu Thr Thr Leu Ala Thr Asn
 85 90 95
 Asn Gly Tyr Ile Lys Phe Ser Asn Leu Ile Gln Asp Ser Gly Leu Leu
 100 105 110
 Ser Val Ile Thr Asp Pro Ile His Thr Pro Val Thr Leu Phe Trp Pro
 115 120 125
 Thr Asp Gln Ala Leu His Ala Leu Pro Ala Glu Gln Gln Asp Phe Leu
 130 135 140
 Phe Asn Gln Asp Asn Lys Asp Lys Leu Lys Glu Tyr Leu Lys Phe His
 145 150 155 160
 Val Ile Arg Asp Ala Lys Val Leu Ala Val Asp Leu Pro Thr Ser Thr
 165 170 175
 Ala Trp Lys Thr Leu Gln Gly Ser Glu Leu Ser Val Lys Cys Gly Ala
 180 185 190
 Gly Arg Asp Ile Gly Asp Leu Phe Leu Asn Gly Gln Thr Cys Arg Ile
 195 200 205
 Val Gln Arg Glu Leu Leu Phe Asp Leu Gly Val Ala Tyr Gly Ile Asp
 210 215 220
 Cys Leu Leu Ile Asp Pro Thr Leu Gly Gly Arg Cys Asp Thr Phe Thr
 225 230 235 240
 Thr Phe Asp Ala Ser Gly Glu Cys Gly Ser Cys Val Asn Thr Pro Ser
 245 250 255
 Cys Pro Arg Trp Ser Lys Pro Lys Gly Val Lys Gln Lys Cys Leu Tyr
 260 265 270
 Asn Leu Pro Phe Lys Arg Asn Leu Glu Gly Cys Arg Glu Arg Cys Ser
 275 280 285
 Leu Val Ile Gln Ile Pro Arg Cys Cys Lys Gly Tyr Phe Gly Arg Asp
 290 295 300
 Cys Gln Ala Cys Pro Gly Gly Pro Asp Ala Pro Cys Asn Asn Arg Gly
 305 310 315 320
 Val Cys Leu Asp Gln Tyr Ser Ala Thr Gly Glu Cys Lys Cys Asn Thr
 325 330 335
 Gly Phe Asn Gly Thr Ala Cys Glu Met Cys Trp Pro Gly Arg Phe Gly
 Page 95

340 345 350
 Pro Asp Cys₃₅₅ Leu Pro Cys Gly Cys₃₆₀ Ser Asp His Gly Gln₃₆₅ Cys Asp Asp
 Gly Ile₃₇₀ Thr Gly Ser Gly Gln₃₇₅ Cys Leu Cys Glu Thr Gly Trp Thr Gly
 Pro₃₈₅ Ser Cys Asp Thr Gln₃₉₀ Ala Val Leu Pro Ala₃₉₅ Val Cys Thr Pro₄₀₀
 Cys Ser Ala His₄₀₅ Thr Cys Lys Glu Asn₄₁₀ Asn Thr Cys Glu Cys₄₁₅ Asn
 Leu Asp Tyr Glu₄₂₀ Gly Asp Gly Ile₄₂₅ Thr Cys Thr Val Val Asp₄₃₀ Phe Cys
 Lys Gln₄₃₅ Asp Asn Gly Gly Cys Ala₄₄₀ Lys Val Ala Arg Cys₄₄₅ Ser Gln Lys
 Gly Thr₄₅₀ Lys Val Ser Cys Ser₄₅₅ Cys Gln Lys Gly Tyr₄₆₀ Lys Gly Asp Gly
 His₄₆₅ Ser Cys Thr Glu Ile₄₇₀ Asp Pro Cys Ala Asp₄₇₅ Gly Leu Asn Gly₄₈₀
 Cys His Glu His₄₈₅ Thr Cys Lys Met Thr₄₉₀ Gly Pro Gly Lys His₄₉₅ Lys
 Cys Glu Cys Lys₅₀₀ Ser His Tyr Val Gly₅₀₅ Asp Gly Leu Asn Cys₅₁₀ Glu Pro
 Glu Gln₅₁₅ Leu Pro Ile Asp Arg Cys₅₂₀ Leu Gln Asp Asn Gly₅₂₅ Gln Cys His
 Ala Asp₅₃₀ Ala Lys Cys Val Asp₅₃₅ Leu His Phe Gln Asp₅₄₀ Thr Thr Val Gly
 Val₅₄₅ Phe His Leu Arg Ser₅₅₀ Pro Leu Gly Gln Tyr₅₅₅ Lys Leu Thr Phe Asp₅₆₀
 Lys Ala Arg Glu Ala₅₆₅ Cys Ala Asn Glu Ala₅₇₀ Ala Thr Met Ala Thr₅₇₅ Tyr
 Asn Gln Leu Ser₅₈₀ Tyr Ala Gln Lys Ala₅₈₅ Lys Tyr His Leu Cys₅₉₀ Ser Ala
 Gly Trp Leu₅₉₅ Glu Thr Gly Arg Val Ala Tyr Pro Thr Ala₆₀₅ Phe Ala Ser
 Gln Asn Cys Gly Ser Gly Val₆₁₅ Val Gly Ile Val Asp₆₂₀ Tyr Gly Pro Arg
 Pro Asn Lys Ser Glu Met₆₃₀ Trp Asp Val Phe Cys₆₃₅ Tyr Arg Met Lys Asp₆₄₀
 Val Asn Cys Thr Cys₆₄₅ Lys Val Gly Tyr Val₆₅₀ Gly Asp Gly Phe Ser₆₅₅ Cys
 Ser Gly Asn Leu₆₆₀ Leu Gln Val Leu Met₆₆₅ Ser Phe Pro Ser Leu₆₇₀ Thr Asn
 Phe Leu Thr Glu Val Leu Ala Tyr Ser Asn Ser Ser Ala Arg Gly Arg

675 680 685
 Ala Phe Leu Glu His Leu Thr Asp Leu Ser Ile Arg Gly Thr Leu Phe
 690 695 700
 Val Pro Gln Asn Ser Gly Leu Gly Glu Asn Glu Thr Leu Ser Gly Arg
 705 710 715 720
 Asp Ile Glu His His Leu Ala Asn Val Ser Met Phe Phe Tyr Asn Asp
 725 730 735
 Leu Val Asn Gly Thr Thr Leu Gln Thr Arg Val Gly Ser Lys Leu Leu
 740 745 750
 Ile Thr Ala Ser Gln Asp Pro Leu Gln Pro Thr Glu Thr Arg Phe Val
 755 760 765
 Asp Gly Arg Ala Ile Leu Gln Trp Asp Ile Phe Ala Ser Asn Gly Ile
 770 775 780
 Ile His Val Ile Ser Arg Pro Leu Lys Ala Pro Pro Ala Pro Val Thr
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 Leu Thr His Thr Gly Leu Gly Ala Gly Ile Phe Phe Ala Ile Ile Leu
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 Val Thr Gly Ala Val Ala Leu Ala Ala Tyr Ser Tyr Phe Arg Ile Asn
 820 825 830
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Leu

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 35 40 45
 Ala Ile Lys Lys Gln Thr Cys Pro Ser Gly Trp Leu Arg Glu Leu Pro
 50 55 60

Asp Gln Ile Thr Gln Asp Cys Arg Tyr Glu Val Gln Leu Gly Gly Ser
 65 70 75 80
 Met Val Ser Met Ser Gly Cys Arg Arg Lys Cys Arg Lys Gln Val Val
 85 90 95
 Gln Lys Ala Cys Cys Pro Gly Tyr Trp Gly Ser Arg Cys His Glu Cys
 100 105 110
 Pro Gly Gly Ala Glu Thr Pro Cys Asn Gly His Gly Thr Cys Leu Asp
 115 120 125
 Gly Met Asp Arg Asn Gly Thr Cys Val Cys Gln Glu Asn Phe Arg Gly
 130 135 140
 Ser Ala Cys Gln Glu Cys Gln Asp Pro Asn Arg Phe Gly Pro Asp Cys
 145 150 155 160
 Gln Ser Val Cys Ser Cys Val His Gly Val Cys Asn His Gly Pro Arg
 165 170 175
 Gly Asp Gly Ser Cys Leu Cys Phe Ala Gly Tyr Thr Gly Pro His Cys
 180 185 190
 Asp Gln Glu Leu Pro Val Cys Gln Glu Leu Arg Cys Pro Gln Asn Thr
 195 200 205
 Gln Cys Ser Ala Glu Ala Pro Ser Cys Arg Cys Leu Pro Gly Tyr Thr
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 225 230 235 240
 Cys Ser Leu Leu Ala Gln Cys Ser Val Ser Pro Lys Gly Gln Ala Gln
 245 250 255
 Cys His Cys Pro Glu Asn Tyr His Gly Asp Gly Met Val Cys Leu Pro
 260 265 270
 Lys Asp Pro Cys Thr Asp Asn Leu Gly Gly Cys Pro Ser Asn Ser Thr
 275 280 285
 Leu Cys Val Tyr Gln Lys Pro Gly Gln Ala Phe Cys Thr Cys Arg Pro
 290 295 300
 Gly Leu Val Ser Ile Asn Ser Asn Ala Ser Ala Gly Cys Phe Ala Phe
 305 310 315 320
 Cys Ser Pro Phe Ser Cys Asp Arg Ser Ala Thr Cys Gln Val Thr Ala
 325 330 335
 Asp Gly Lys Thr Ser Cys Val Cys Arg Glu Ser Glu Val Gly Asp Gly
 340 345 350
 Arg Ala Cys Tyr Gly His Leu Leu His Glu Val Gln Lys Ala Thr Gln
 355 360 365
 Thr Gly Arg Val Phe Leu Gln Leu Arg Val Ala Val Ala Met Met Asp
 370 375 380
 Gln Gly Cys Arg Glu Ile Leu Thr Thr Ala Gly Pro Phe Thr Val Leu
 385 390 395 400

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Val	Pro	Ser	Val	Ser	Ser	Phe	Ser	Ser	Arg	Thr	Met	Asn	Ala	Ser	Leu
			405						410					415	
Ala	Gln	Gln	Leu	Cys	Arg	Gln	His	Ile	Ile	Ala	Gly	Gln	His	Ile	Leu
			420					425					430		
Glu	Asp	Thr	Arg	Thr	Gln	Gln	Thr	Arg	Arg	Trp	Trp	Thr	Leu	Ala	Gly
		435					440					445			
Gln	Glu	Ile	Thr	Val	Thr	Phe	Asn	Gln	Phe	Thr	Lys	Tyr	Ser	Tyr	Lys
	450					455					460				
Tyr	Lys	Asp	Gln	Pro	Gln	Gln	Thr	Phe	Asn	Ile	Tyr	Lys	Ala	Asn	Asn
465					470					475					480
Ile	Ala	Ala	Asn	Gly	Val	Phe	His	Val	Val	Thr	Gly	Leu	Arg	Trp	Gln
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Ala	Pro	Ser	Gly	Thr	Pro	Gly	Asp	Pro	Lys	Arg	Thr	Ile	Gly	Gln	Ile
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Leu	Ala	Ser	Thr	Glu	Ala	Phe	Ser	Arg	Phe	Glu	Thr	Ile	Leu	Glu	Asn
		515					520					525			
Cys	Gly	Leu	Pro	Ser	Ile	Leu	Asp	Gly	Pro	Gly	Pro	Phe	Thr	Val	Phe
	530					535					540				
Ala	Pro	Ser	Asn	Glu	Ala	Val	Asp	Ser	Leu	Arg	Asp	Gly	Arg	Leu	Ile
545					550					555					560
Tyr	Leu	Phe	Thr	Ala	Gly	Leu	Ser	Lys	Leu	Gln	Glu	Leu	Val	Arg	Tyr
				565					570					575	
His	Ile	Tyr	Asn	His	Gly	Gln	Leu	Thr	Val	Glu	Lys	Leu	Ile	Ser	Lys
			580					585					590		
Gly	Arg	Ile	Leu	Thr	Met	Ala	Asn	Gln	Val	Leu	Ala	Val	Asn	Ile	Ser
		595					600					605			
Glu	Glu	Gly	Arg	Ile	Leu	Leu	Gly	Pro	Glu	Gly	Val	Pro	Leu	Gln	Arg
	610					615					620				
Val	Asp	Val	Met	Ala	Ala	Asn	Gly	Val	Ile	His	Met	Leu	Asp	Gly	Ile
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Leu	Leu	Pro	Pro	Thr	Ile	Leu	Pro	Ile	Leu	Pro	Lys	His	Cys	Ser	Glu
				645					650					655	
Glu	Gln	His	Lys	Ile	Val	Ala	Gly	Ser	Cys	Val	Asp	Cys	Gln	Ala	Leu
			660					665					670		
Asn	Thr	Ser	Thr	Cys	Pro	Pro	Asn	Ser	Val	Lys	Leu	Asp	Ile	Phe	Pro
		675					680					685			
Lys	Glu	Cys	Val	Tyr	Ile	His	Asp	Pro	Thr	Gly	Leu	Asn	Val	Leu	Lys
	690					695					700				
Lys	Gly	Cys	Ala	Ser	Tyr	Cys	Asn	Gln	Thr	Ile	Met	Glu	Gln	Gly	Cys
705					710					715					720
Cys	Lys	Gly	Phe	Phe	Gly	Pro	Asp	Cys	Thr	Gln	Cys	Pro	Gly	Gly	Phe
				725					730					735	

Ser Asn Pro Cys Tyr Gly Lys Gly Asn Cys Ser Asp Gly Ile Gln Gly
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 Asn Gly Ala Cys Leu Cys Phe Pro Asp Tyr Lys Gly Ile Ala Cys His
 755 760 765
 Ile Cys Ser Asn Pro Asn Lys His Gly Glu Gln Cys Gln Glu Asp Cys
 770 775 780
 Gly Cys Val His Gly Leu Cys Asp Asn Arg Pro Gly Ser Gly Gly Val
 785 790 795 800
 Cys Gln Gln Gly Thr Cys Ala Pro Gly Phe Ser Gly Arg Phe Cys Asn
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 Glu Ser Met Gly Asp Cys Gly Pro Thr Gly Leu Ala Gln His Cys His
 820 825 830
 Leu His Ala Arg Cys Val Ser Gln Glu Gly Val Ala Arg Cys Arg Cys
 835 840 845
 Leu Asp Gly Phe Glu Gly Asp Gly Phe Ser Cys Thr Pro Ser Asn Pro
 850 855 860
 Cys Ser His Pro Asp Arg Gly Gly Cys Ser Glu Asn Ala Glu Cys Val
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 Pro Gly Ser Leu Gly Thr His His Cys Thr Cys His Lys Gly Trp Ser
 885 890 895
 Gly Asp Gly Arg Val Cys Val Ala Ile Asp Glu Cys Glu Leu Asp Val
 900 905 910
 Gly Gly Gly Cys His Thr Asp Ala Leu Cys Ser Tyr Val Gly Pro Gly
 915 920 925
 Gln Ser Arg Cys Thr Cys Lys Leu Gly Phe Ala Gly Asp Gly Tyr Gln
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 Cys Ser Pro Ile Asp Pro Cys Arg Ala Gly Asn Gly Gly Cys His Gly
 945 950 955 960
 Leu Ala Thr Cys Arg Ala Val Gly Gly Gly Gln Arg Val Cys Thr Cys
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 Pro Pro Gly Phe Gly Gly Asp Gly Phe Ser Cys Tyr Gly Asp Ile Phe
 980 985 990
 Arg Glu Leu Glu Ala Asn Ala His Phe Ser Ile Phe Tyr Gln Trp Leu
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 Lys Ser Ala Gly Ile Thr Leu Pro Ala Asp Arg Arg Val Thr Ala Leu
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 Val Pro Ser Glu Ala Ala Val Arg Gln Leu Ser Pro Glu Asp Arg Ala
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 Phe Trp Leu Gln Pro Arg Thr Leu Pro Asn Leu Val Arg Ala His Phe
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 Leu Gln Gly Ala Leu Phe Glu Glu Glu Leu Ala Arg Leu Gly Gly Gln
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Glu Val Ala Thr Leu Asn Pro Thr Thr Arg Trp Glu Ile Arg Asn Ile
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 Ser Gly Arg Val Trp Val Gln Asn Ala Ser Val Asp Val Ala Asp Leu
 1090 1095 1100
 Leu Ala Thr Asn Gly Val Leu His Ile Leu Ser Gln Val Leu Leu Pro
 1105 1110 1115 1120
 Pro Arg Gly Asp Val Pro Gly Gly Gln Gly Leu Leu Gln Gln Leu Asp
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 Leu Val Pro Ala Phe Ser Leu Phe Arg Glu Leu Leu Gln His His Gly
 1140 1145 1150
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 Thr Asn Arg Ser Leu Glu Ala Gln Gly Asn Ser Ser His Leu Asp Ala
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 1185 1190 1195 1200
 Thr Leu Arg Lys Gly Gly His Arg Asn Ser Leu Leu Gly Pro Ala His
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 Trp Ile Val Phe Tyr Asn His Ser Gly Gln Pro Glu Val Asn His Val
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 1315 1320 1325
 Cys Glu Pro Cys Pro Gly Gly Leu Gly Gly Val Cys Ser Gly His Gly
 1330 1335 1340
 Gln Cys Gln Asp Arg Phe Leu Gly Ser Gly Glu Cys His Cys His Glu
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 Pro Asn Cys Thr Gly Val Cys Asp Cys Ala His Gly Leu Cys Gln Glu
 1380 1385 1390
 Gly Leu Gln Gly Asp Gly Ser Cys Val Cys Asn Val Gly Trp Gln Gly
 1395 1400 1405

Leu Arg Cys Asp Gln Lys Ile Thr Ser Pro Gln Cys Pro Arg Lys Cys
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 Asp Pro Asn Ala Asn Cys Val Gln Asp Ser Ala Gly Ala Ser Thr Cys
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 Ala Cys Ala Ala Gly Tyr Ser Gly Asn Gly Ile Phe Cys Ser Glu Val
 1445 1450 1455
 Asp Pro Cys Ala His Gly His Gly Gly Cys Ser Pro His Ala Asn Cys
 1460 1465 1470
 Thr Lys Val Ala Pro Gly Gln Arg Thr Cys Thr Cys Gln Asp Gly Tyr
 1475 1480 1485
 Met Gly Asp Gly Glu Leu Cys Gln Glu Ile Asn Ser Cys Leu Ile His
 1490 1495 1500
 His Gly Gly Cys His Ile His Ala Glu Cys Ile Pro Thr Gly Pro Gln
 1505 1510 1515 1520
 Gln Val Ser Cys Ser Cys Arg Glu Gly Tyr Ser Gly Asp Gly Ile Arg
 1525 1530 1535
 Thr Cys Glu Leu Leu Asp Pro Cys Ser Lys Asn Asn Gly Gly Cys Ser
 1540 1545 1550
 Pro Tyr Ala Thr Cys Lys Ser Thr Gly Asp Gly Gln Arg Thr Cys Thr
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 Cys Asp Thr Ala His Thr Val Gly Asp Gly Leu Thr Cys Arg Ala Arg
 1570 1575 1580
 Val Gly Leu Glu Leu Leu Arg Asp Lys His Ala Ser Phe Phe Ser Leu
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 1605 1610 1615
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 1635 1640 1645
 Gly Cys Arg Arg Leu Arg Ser Glu Asp Leu Leu Glu Gln Gly Tyr Ala
 1650 1655 1660
 Thr Ala Leu Ser Gly His Pro Leu Arg Phe Ser Glu Arg Glu Gly Ser
 1665 1670 1675 1680
 Ile Tyr Leu Asn Asp Phe Ala Arg Val Val Ser Ser Asp His Glu Ala
 1685 1690 1695
 Val Asn Gly Ile Leu His Phe Ile Asp Arg Val Leu Leu Pro Pro Glu
 1700 1705 1710
 Ala Leu His Trp Glu Pro Asp Asp Ala Pro Ile Pro Arg Arg Asn Val
 1715 1720 1725
 Thr Ala Ala Ala Gln Gly Phe Gly Tyr Lys Ile Phe Ser Gly Leu Leu
 1730 1735 1740

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Lys Val Ala Gly Leu Leu Pro Leu Leu Arg Glu Ala Ser His Arg Pro
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 Phe Thr Met Leu Trp Pro Thr Asp Ala Ala Phe Arg Ala Leu Pro Pro
 1765 1770 1775
 Asp Arg Gln Ala Trp Leu Tyr His Glu Asp His Arg Asp Lys Leu Ala
 1780 1785 1790
 Ala Ile Leu Arg Gly His Met Ile Arg Asn Val Glu Ala Leu Ala Ser
 1795 1800 1805
 Asp Leu Pro Asn Leu Gly Pro Leu Arg Thr Met His Gly Thr Pro Ile
 1810 1815 1820
 Ser Phe Ser Cys Ser Arg Thr Arg Pro Gly Glu Leu Met Val Gly Glu
 1825 1830 1835 1840
 Asp Asp Ala Arg Ile Val Gln Arg His Leu Pro Phe Glu Gly Gly Leu
 1845 1850 1855
 Ala Tyr Gly Ile Asp Gln Leu Leu Glu Pro Pro Gly Leu Gly Ala Arg
 1860 1865 1870
 Cys Asp His Phe Glu Thr Arg Pro Leu Arg Leu Asn Thr Cys Ser Ile
 1875 1880 1885
 Cys Gly Leu Glu Pro Pro Cys Pro Glu Gly Ser Gln Glu Gln Gly Ser
 1890 1895 1900
 Pro Glu Ala Cys Trp Arg Phe Tyr Pro Lys Phe Trp Thr Ser Pro Pro
 1905 1910 1915 1920
 Leu His Ser Leu Gly Leu Arg Ser Val Trp Val His Pro Ser Leu Trp
 1925 1930 1935
 Gly Arg Pro Gln Gly Leu Gly Arg Gly Cys His Arg Asn Cys Val Thr
 1940 1945 1950
 Thr Thr Trp Lys Pro Ser Cys Cys Pro Gly His Tyr Gly Ser Glu Cys
 1955 1960 1965
 Gln Ala Cys Pro Gly Gly Pro Ser Ser Pro Cys Ser Asp Arg Gly Val
 1970 1975 1980
 Cys Met Asp Gly Met Ser Gly Ser Gly Gln Cys Leu Cys Arg Ser Gly
 1985 1990 1995 2000
 Phe Ala Gly Thr Ala Cys Glu Leu Cys Ala Pro Gly Ala Phe Gly Pro
 2005 2010 2015
 His Cys Gln Ala Cys Arg Cys Thr Val His Gly Arg Cys Asp Glu Gly
 2020 2025 2030
 Leu Gly Gly Ser Gly Ser Cys Phe Cys Asp Glu Gly Trp Thr Gly Pro
 2035 2040 2045
 Arg Cys Glu Val Gln Leu Glu Leu Gln Pro Val Cys Thr Pro Pro Cys
 2050 2055 2060
 Ala Pro Glu Ala Val Cys Arg Ala Gly Asn Ser Cys Glu Cys Ser Leu
 2065 2070 2075 2080

Gly Tyr Glu Gly Asp Gly Arg Val Cys Thr Val Ala Asp Leu Cys Gln
 2085 2090 2095
 Asp Gly His Gly Gly Cys Ser Glu His Ala Asn Cys Ser Gln Val Gly
 2100 2105 2110
 Thr Met Val Thr Cys Thr Cys Leu Pro Asp Tyr Glu Gly Asp Gly Trp
 2115 2120 2125
 Ser Cys Arg Ala Arg Asn Pro Cys Thr Asp Gly His Arg Gly Gly Cys
 2130 2135 2140
 Ser Glu His Ala Asn Cys Leu Ser Thr Gly Leu Asn Thr Arg Arg Cys
 2145 2150 2155 2160
 Glu Cys His Ala Gly Tyr Val Gly Asp Gly Leu Gln Cys Leu Glu Glu
 2165 2170 2175
 Ser Glu Pro Pro Val Asp Arg Cys Leu Gly Gln Pro Pro Pro Cys His
 2180 2185 2190
 Ser Asp Ala Met Cys Thr Asp Gln His Phe Gln Glu Lys Arg Ala Gly
 2195 2200 2205
 Val Phe His Leu Gln Ala Thr Ser Gly Pro Tyr Gly Leu Asn Phe Ser
 2210 2215 2220
 Glu Ala Glu Ala Ala Cys Glu Ala Gln Gly Ala Val Leu Ala Ser Phe
 2225 2230 2235 2240
 Pro Gln Leu Ser Ala Ala Gln Gln Leu Gly Phe His Leu Cys Leu Met
 2245 2250 2255
 Gly Trp Leu Ala Asn Gly Ser Thr Ala His Pro Val Val Phe Pro Val
 2260 2265 2270
 Ala Asp Cys Gly Asn Gly Arg Val Gly Val Val Ser Leu Gly Ala Arg
 2275 2280 2285
 Lys Asn Leu Ser Glu Arg Trp Asp Ala Tyr Cys Phe Arg Val Gln Asp
 2290 2295 2300
 Val Ala Cys Arg Cys Arg Asn Gly Phe Val Gly Asp Gly Ile Ser Thr
 2305 2310 2315 2320
 Cys Asn Gly Lys Leu Leu Asp Val Leu Ala Ala Thr Ala Asn Phe Ser
 2325 2330 2335
 Thr Phe Tyr Gly Met Leu Leu Gly Tyr Ala Asn Ala Thr Gln Arg Gly
 2340 2345 2350
 Leu Asp Phe Leu Asp Phe Leu Asp Asp Glu Leu Thr Tyr Lys Thr Leu
 2355 2360 2365
 Phe Val Pro Val Asn Glu Gly Phe Val Asp Asn Met Thr Leu Ser Gly
 2370 2375 2380
 Pro Asp Leu Glu Leu His Ala Ser Asn Ala Thr Leu Leu Ser Ala Asn
 2385 2390 2395 2400
 Ala Ser Gln Gly Lys Leu Leu Pro Ala His Ser Gly Leu Ser Leu Ile
 2405 2410 2415

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Ile Ser Asp Ala Gly Pro Asp Asn Ser Ser Trp Ala Pro Val Ala Pro
 2420 2425 2430
 Gly Thr Val Val Val Ser Arg Ile Ile Val Trp Asp Ile Met Ala Phe
 2435 2440 2445
 Asn Gly Ile Ile His Ala Leu Ala Ser Pro Leu Leu Ala Pro Pro Gln
 2450 2455 2460
 Pro Gln Ala Val Leu Ala Pro Glu Ala Pro Pro Val Ala Ala Gly Val
 2465 2470 2475 2480
 Gly Ala Val Leu Ala Ala Gly Ala Leu Leu Gly Leu Val Ala Gly Ala
 2485 2490 2495
 Leu Tyr Leu Arg Ala Arg Gly Lys Pro Thr Gly Phe Gly Phe Ser Ala
 2500 2505 2510
 Phe Gln Ala Glu Asp Asp Ala Asp Asp Asp Phe Ser Pro Trp Gln Glu
 2515 2520 2525
 Gly Thr Asn Pro Thr Leu Val Ser Val Pro Asn Pro Val Phe Gly Ser
 2530 2535 2540
 Asp Thr Phe Cys Glu Pro Phe Asp Asp Ser Leu Leu Glu Glu Asp Phe
 2545 2550 2555 2560
 Pro Asp Thr Gln Arg Ile Leu Thr Val Lys
 2565 2570

<210> 43
 <211> 2212
 <212> PRT
 <213> Homo sapiens

<400> 43
 Cys Asp Arg Ser Ala Thr Cys Gln Val Thr Ala Asp Gly Lys Thr Ser
 1 5 10 15
 Cys Val Cys Arg Glu Ser Glu Val Gly Asp Gly Arg Ala Cys Tyr Gly
 20 25 30
 His Leu Leu His Glu Val Gln Lys Ala Thr Gln Thr Gly Arg Val Phe
 35 40 45
 Leu Gln Leu Arg Val Ala Val Ala Met Met Asp Gln Gly Cys Arg Glu
 50 55 60
 Ile Leu Thr Thr Ala Gly Pro Phe Thr Val Leu Val Pro Ser Val Ser
 65 70 75 80
 Ser Phe Ser Ser Arg Thr Met Asn Ala Ser Leu Ala Gln Gln Leu Cys
 85 90 95
 Arg Gln His Ile Ile Ala Gly Gln His Ile Leu Glu Asp Thr Arg Thr
 100 105 110
 Gln Gln Thr Arg Arg Trp Trp Thr Leu Ala Gly Gln Glu Ile Thr Val
 115 120 125
 Thr Phe Asn Gln Phe Thr Lys Tyr Ser Tyr Lys Tyr Lys Asp Gln Pro
 130 135 140

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Gln Gln Thr Phe Asn Ile Tyr Lys Ala Asn Asn Ile Ala Ala Asn Gly
 145 150 155 160
 Val Phe His Val Val Thr Gly Leu Arg Trp Gln Ala Pro Ser Gly Thr
 165 170 175
 Pro Gly Asp Pro Lys Arg Thr Ile Gly Gln Ile Leu Ala Ser Thr Glu
 180 185 190
 Ala Phe Ser Arg Phe Glu Thr Ile Leu Glu Asn Cys Gly Leu Pro Ser
 195 200 205
 Ile Leu Asp Gly Pro Gly Pro Phe Thr Val Phe Ala Pro Ser Asn Glu
 210 215 220
 Ala Val Asp Ser Leu Arg Asp Gly Arg Leu Ile Tyr Leu Phe Thr Ala
 225 230 235 240
 Gly Leu Ser Lys Leu Gln Glu Leu Val Arg Tyr His Ile Tyr Asn His
 245 250 255
 Gly Gln Leu Thr Val Glu Lys Leu Ile Ser Lys Gly Arg Ile Leu Thr
 260 265 270
 Met Ala Asn Gln Val Leu Ala Val Asn Ile Ser Glu Glu Gly Arg Ile
 275 280 285
 Leu Leu Gly Pro Glu Gly Val Pro Leu Gln Arg Val Asp Val Met Ala
 290 295 300
 Ala Asn Gly Val Ile His Met Leu Asp Gly Ile Leu Leu Pro Pro Thr
 305 310 315 320
 Ile Leu Pro Ile Leu Pro Lys His Cys Ser Glu Glu Gln His Lys Ile
 325 330 335
 Val Ala Gly Ser Cys Val Asp Cys Gln Ala Leu Asn Thr Ser Thr Cys
 340 345 350
 Pro Pro Asn Ser Val Lys Leu Asp Ile Phe Pro Lys Glu Cys Val Tyr
 355 360 365
 Ile His Asp Pro Thr Gly Leu Asn Val Leu Lys Lys Gly Cys Ala Ser
 370 375 380
 Tyr Cys Asn Gln Thr Ile Met Glu Gln Gly Cys Cys Lys Gly Phe Phe
 385 390 395 400
 Gly Pro Asp Cys Thr Gln Cys Pro Gly Gly Phe Ser Asn Pro Cys Tyr
 405 410 415
 Gly Lys Gly Asn Cys Ser Asp Gly Ile Gln Gly Asn Gly Ala Cys Leu
 420 425 430
 Cys Phe Pro Asp Tyr Lys Gly Ile Ala Cys His Ile Cys Ser Asn Pro
 435 440 445
 Asn Lys His Gly Glu Gln Cys Gln Glu Asp Cys Gly Cys Val His Gly
 450 455 460
 Leu Cys Asp Asn Arg Pro Gly Ser Gly Gly Val Cys Gln Gln Gly Thr
 465 470 475 480

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Cys Ala Pro Gly Phe Ser Gly Arg Phe Cys Asn Glu Ser Met Gly Asp
 485 490 495
 Cys Gly Pro Thr Gly Leu Ala Gln His Cys His Leu His Ala Arg Cys
 500 505 510
 Val Ser Gln Glu Gly Val Ala Arg Cys Arg Cys Leu Asp Gly Phe Glu
 515 520 525
 Gly Asp Gly Phe Ser Cys Thr Pro Ser Asn Pro Cys Ser His Pro Asp
 530 535 540
 Arg Gly Gly Cys Ser Glu Asn Ala Glu Cys Val Pro Gly Ser Leu Gly
 545 550 555 560
 Thr His His Cys Thr Cys His Lys Gly Trp Ser Gly Asp Gly Arg Val
 565 570 575
 Cys Val Ala Ile Asp Glu Cys Glu Leu Asp Val Arg Gly Gly Cys His
 580 585 590
 Thr Asp Ala Leu Cys Ser Tyr Val Gly Pro Gly Gln Ser Arg Cys Thr
 595 600 605
 Cys Lys Leu Gly Phe Ala Gly Asp Gly Tyr Gln Cys Ser Pro Ile Asp
 610 615 620
 Pro Cys Arg Ala Gly Asn Gly Gly Cys His Gly Leu Glu Leu Glu Ala
 625 630 635 640
 Asn Ala His Phe Ser Ile Phe Tyr Gln Trp Leu Lys Ser Ala Gly Ile
 645 650 655
 Thr Leu Pro Ala Asp Arg Arg Val Thr Ala Leu Val Pro Ser Glu Ala
 660 665 670
 Ala Val Arg Gln Leu Ser Pro Glu Asp Arg Ala Phe Trp Leu Gln Pro
 675 680 685
 Arg Thr Leu Pro Asn Leu Val Arg Ala His Phe Leu Gln Gly Ala Leu
 690 695 700
 Phe Glu Glu Glu Leu Ala Arg Leu Gly Gly Gln Glu Val Ala Thr Leu
 705 710 715 720
 Asn Pro Thr Thr Arg Trp Glu Ile Arg Asn Ile Ser Gly Arg Val Trp
 725 730 735
 Val Gln Asn Ala Ser Val Asp Val Ala Asp Leu Leu Ala Thr Asn Gly
 740 745 750
 Val Leu His Ile Leu Ser Gln Val Leu Leu Pro Pro Arg Gly Asp Val
 755 760 765
 Pro Gly Gly Gln Gly Leu Leu Gln Gln Leu Asp Leu Val Pro Ala Phe
 770 775 780
 Ser Leu Phe Arg Glu Leu Leu Gln His His Gly Leu Val Pro Gln Ile
 785 790 795 800
 Glu Ala Ala Thr Ala Tyr Thr Ile Phe Val Pro Thr Asn Arg Ser Leu
 805 810 815

Glu Ala Gln Gly Asn Ser Ser His Leu Asp Ala Asp Thr Val Arg His
 820 825 830
 His Val Val Leu Gly Glu Ala Leu Ser Met Glu Thr Leu Arg Lys Gly
 835 840 845
 Gly His Arg Asn Ser Leu Leu Gly Pro Ala His Trp Ile Val Phe Tyr
 850 855 860
 Asn His Ser Gly Gln Pro Glu Val Asn His Val Pro Leu Glu Gly Pro
 865 870 875 880
 Met Leu Glu Ala Pro Gly Arg Ser Leu Ile Gly Leu Ser Gly Val Leu
 885 890 895
 Thr Val Gly Ser Ser Arg Cys Leu His Ser His Ala Glu Ala Leu Arg
 900 905 910
 Glu Lys Cys Val Asn Cys Thr Arg Arg Phe Arg Cys Thr Gln Gly Phe
 915 920 925
 Gln Leu Gln Asp Thr Pro Arg Lys Ser Cys Val Tyr Arg Ser Gly Phe
 930 935 940
 Ser Phe Ser Arg Gly Cys Ser Tyr Thr Cys Ala Lys Lys Ile Gln Val
 945 950 955 960
 Pro Asp Cys Cys Pro Gly Phe Phe Gly Thr Leu Cys Glu Pro Cys Pro
 965 970 975
 Gly Gly Leu Gly Gly Val Cys Ser Gly His Gly Gln Cys Gln Asp Arg
 980 985 990
 Phe Leu Gly Ser Gly Glu Cys His Cys His Glu Gly Phe His Gly Thr
 995 1000 1005
 Ala Cys Glu Val Cys Glu Leu Gly Arg Tyr Gly Pro Asn Cys Thr Gly
 1010 1015 1020
 Val Cys Asp Cys Ala His Gly Leu Cys Gln Glu Gly Leu Gln Gly Asp
 1025 1030 1035 1040
 Gly Ser Cys Val Cys Asn Val Gly Trp Gln Gly Leu Arg Cys Asp Gln
 1045 1050 1055
 Lys Ile Thr Ser Pro Gln Cys Pro Arg Lys Cys Asp Pro Asn Ala Asn
 1060 1065 1070
 Cys Val Gln Asp Ser Ala Gly Ala Ser Thr Cys Ala Cys Ala Ala Gly
 1075 1080 1085
 Tyr Ser Gly Asn Gly Ile Phe Cys Ser Glu Val Asp Pro Cys Ala His
 1090 1095 1100
 Gly His Gly Gly Cys Ser Pro His Ala Asn Cys Thr Lys Val Ala Pro
 1105 1110 1115 1120
 Gly Gln Arg Thr Cys Thr Cys Gln Asp Gly Tyr Met Gly Asp Gly Glu
 1125 1130 1135
 Leu Cys Gln Glu Ile Asn Ser Cys Leu Ile His His Gly Gly Cys His
 1140 1145 1150

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Ile His Ala Glu Cys Ile Pro Thr Gly Pro Gln Gln Val Ser Cys Ser
 1155 1160 1165
 Cys Arg Glu Gly Tyr Ser Gly Asp Gly Ile Arg Thr Cys Glu Leu Leu
 1170 1175 1180
 Asp Pro Cys Ser Lys Asn Asn Gly Gly Cys Ser Pro Tyr Ala Thr Cys
 1185 1190 1195 1200
 Lys Ser Thr Gly Asp Gly Gln Arg Thr Cys Thr Cys Asp Thr Ala His
 1205 1210 1215
 Thr Val Gly Asp Gly Leu Thr Cys Arg Ala Arg Val Gly Leu Glu Leu
 1220 1225 1230
 Leu Arg Asp Lys His Ala Ser Phe Phe Ser Leu Arg Leu Leu Glu Tyr
 1235 1240 1245
 Lys Glu Leu Lys Gly Asp Gly Pro Phe Thr Ile Phe Val Pro His Ala
 1250 1255 1260
 Asp Leu Met Ser Asn Leu Ser Gln Asp Glu Leu Ala Arg Ile Arg Ala
 1265 1270 1275 1280
 His Arg Gln Leu Val Phe Arg Tyr His Val Val Gly Cys Arg Arg Leu
 1285 1290 1295
 Arg Ser Glu Asp Leu Leu Glu Gln Gly Tyr Ala Thr Ala Leu Ser Gly
 1300 1305 1310
 His Pro Leu Arg Phe Ser Glu Arg Glu Gly Ser Ile Tyr Leu Asn Asp
 1315 1320 1325
 Phe Ala Arg Val Val Ser Ser Asp His Glu Ala Val Asn Gly Ile Leu
 1330 1335 1340
 His Phe Ile Asp Arg Val Leu Leu Pro Pro Glu Ala Leu His Trp Glu
 1345 1350 1355 1360
 Pro Asp Asp Ala Pro Ile Pro Arg Arg Asn Val Thr Ala Ala Ala Gln
 1365 1370 1375
 Gly Phe Gly Tyr Lys Ile Phe Ser Gly Leu Leu Lys Val Ala Gly Leu
 1380 1385 1390
 Leu Pro Leu Leu Arg Glu Ala Ser His Arg Pro Phe Thr Met Leu Trp
 1395 1400 1405
 Pro Thr Asp Ala Ala Phe Arg Ala Leu Pro Pro Asp Arg Gln Ala Trp
 1410 1415 1420
 Leu Tyr His Glu Asp His Arg Asp Lys Leu Ala Ala Ile Leu Arg Gly
 1425 1430 1435 1440
 His Met Ile Arg Asn Val Glu Ala Leu Ala Ser Asp Leu Pro Asn Leu
 1445 1450 1455
 Gly Pro Leu Arg Thr Met His Gly Thr Pro Ile Ser Phe Ser Cys Ser
 1460 1465 1470
 Arg Thr Arg Pro Gly Glu Leu Met Val Gly Glu Asp Asp Ala Arg Ile
 1475 1480 1485

Val Gln Arg His Leu Pro Phe Glu Gly Gly Leu Ala Tyr Gly Ile Asp
 1490 1495 1500
 Gln Leu Leu Glu Pro Pro Gly Leu Gly Ala Arg Cys Asp His Phe Glu
 1505 1510 1515 1520
 Thr Arg Pro Leu Arg Leu Asn Thr Cys Ser Ile Cys Gly Leu Glu Pro
 1525 1530 1535
 Pro Cys Pro Glu Gly Ser Gln Glu Gln Gly Ser Pro Glu Ala Cys Trp
 1540 1545 1550
 Arg Phe Tyr Pro Lys Phe Trp Thr Ser Pro Pro Leu His Ser Leu Gly
 1555 1560 1565
 Leu Arg Ser Val Trp Val His Pro Ser Leu Trp Gly Arg Pro Gln Gly
 1570 1575 1580
 Leu Gly Arg Gly Cys His Arg Asn Cys Val Thr Thr Thr Trp Lys Pro
 1585 1590 1595 1600
 Ser Cys Cys Pro Gly His Tyr Gly Ser Glu Cys Gln Ala Cys Pro Gly
 1605 1610 1615
 Gly Pro Ser Ser Pro Cys Ser Asp Arg Gly Val Cys Met Asp Gly Met
 1620 1625 1630
 Ser Gly Ser Gly Gln Cys Leu Cys Arg Ser Gly Phe Ala Gly Thr Ala
 1635 1640 1645
 Cys Glu Leu Cys Ala Pro Gly Ala Phe Gly Pro His Cys Gln Ala Cys
 1650 1655 1660
 Arg Cys Thr Val His Gly Arg Cys Asp Glu Gly Leu Gly Gly Ser Gly
 1665 1670 1675 1680
 Ser Cys Phe Cys Asp Glu Gly Trp Thr Gly Pro Arg Cys Glu Val Gln
 1685 1690 1695
 Leu Glu Leu Gln Pro Val Cys Thr Pro Pro Cys Ala Pro Glu Ala Val
 1700 1705 1710
 Cys Arg Ala Gly Asn Ser Cys Glu Cys Ser Leu Gly Tyr Glu Gly Asp
 1715 1720 1725
 Gly Arg Val Cys Thr Val Ala Asp Leu Cys Gln Asp Gly His Gly Gly
 1730 1735 1740
 Cys Ser Glu His Ala Asn Cys Ser Gln Val Gly Thr Met Val Thr Cys
 1745 1750 1755 1760
 Thr Cys Leu Pro Asp Tyr Glu Gly Asp Gly Trp Ser Cys Arg Ala Arg
 1765 1770 1775
 Asn Pro Cys Thr Asp Gly His Arg Gly Gly Cys Ser Glu His Ala Asn
 1780 1785 1790
 Cys Leu Ser Thr Gly Leu Asn Thr Arg Arg Cys Glu Cys His Ala Gly
 1795 1800 1805
 Tyr Val Gly Asp Gly Leu Gln Cys Leu Glu Glu Ser Glu Pro Pro Val
 1810 1815 1820

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Asp Arg Cys Leu Gly Gln Pro Pro Pro Cys His Ser Asp Ala Met Cys
 1825 1830 1835 1840
 Thr Asp Leu His Phe Gln Glu Lys Arg Ala Gly Val Phe His Leu Gln
 1845 1850 1855
 Ala Thr Ser Gly Pro Tyr Gly Leu Asn Phe Ser Glu Ala Glu Ala Ala
 1860 1865 1870
 Cys Glu Ala Gln Gly Ala Val Leu Ala Ser Phe Pro Gln Leu Ser Ala
 1875 1880 1885
 Ala Gln Gln Leu Gly Phe His Leu Cys Leu Met Gly Trp Leu Ala Asn
 1890 1895 1900
 Gly Ser Thr Ala His Pro Val Val Phe Pro Val Ala Asp Cys Gly Asn
 1905 1910 1915 1920
 Gly Arg Val Gly Ile Val Ser Leu Gly Ala Arg Lys Asn Leu Ser Glu
 1925 1930 1935
 Arg Trp Asp Ala Tyr Cys Phe Arg Val Gln Asp Val Ala Cys Arg Cys
 1940 1945 1950
 Arg Asn Gly Phe Val Gly Asp Gly Ile Ser Thr Cys Asn Gly Lys Leu
 1955 1960 1965
 Leu Asp Val Leu Ala Ala Thr Ala Asn Phe Ser Thr Phe Tyr Gly Met
 1970 1975 1980
 Leu Leu Gly Tyr Ala Asn Ala Thr Gln Arg Gly Leu Asp Phe Leu Asp
 1985 1990 1995 2000
 Phe Leu Asp Asp Glu Leu Thr Tyr Lys Thr Leu Phe Val Pro Val Asn
 2005 2010 2015
 Glu Gly Phe Val Asp Asn Met Thr Leu Ser Gly Pro Asp Leu Glu Leu
 2020 2025 2030
 His Ala Ser Asn Ala Thr Leu Leu Ser Ala Asn Ala Ser Gln Gly Lys
 2035 2040 2045
 Leu Leu Pro Ala His Ser Gly Leu Ser Leu Ile Ile Ser Asp Ala Gly
 2050 2055 2060
 Pro Asp Asn Ser Ser Trp Ala Pro Val Ala Pro Gly Thr Val Val Val
 2065 2070 2075 2080
 Ser Arg Ile Ile Val Trp Asp Ile Met Ala Phe Asn Gly Ile Ile His
 2085 2090 2095
 Ala Leu Ala Ser Pro Leu Leu Ala Pro Pro Gln Pro Ala Val Leu Ala
 2100 2105 2110
 Pro Glu Ala Pro Pro Val Ala Ala Gly Val Gly Ala Val Leu Ala Ala
 2115 2120 2125
 Gly Ala Leu Leu Gly Leu Val Ala Gly Ala Leu Tyr Leu Arg Ala Arg
 2130 2135 2140
 Gly Lys Pro Met Gly Phe Gly Phe Ser Ala Phe Gln Ala Glu Asp Asp
 2145 2150 2155 2160

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Ala Asp Asp Asp Phe Ser Pro Trp Gln Glu Gly Thr Asn Pro Thr Leu
2165 2170 2175
Val Ser Val Pro Asn Pro Val Phe Gly Ser Asp Thr Phe Cys Glu Pro
2180 2185 2190
Phe Asp Asp Ser Leu Leu Glu Glu Asp Phe Pro Asp Thr Gln Arg Ile
2195 2200 2205
Leu Thr Val Lys
2210

<210> 44
<211> 149
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Fasciclin
Domain Sequence

<400> 44
Ala Gly Thr Val Met Glu Lys Leu Lys Thr Asp Pro Arg Phe Ser Thr
1 5 10 15
Leu Val Ala Ala Leu Glu Ala Ala Asp Leu Val Glu Thr Leu Asn Asn
20 25 30
Ser Gly Asp Phe Thr Val Phe Ala Pro Thr Asn Asp Ala Phe Gln Lys
35 40 45
Leu Pro Ala Gly Asp Leu Lys Thr Leu Asp Glu Leu Leu Asn Lys Glu
50 55 60
Asp Ala Lys Gln Leu Ala Lys Ile Leu Thr Tyr His Val Val Ala Gly
65 70 75 80
Lys Leu Ser Thr Ala Asp Leu Leu Ser Leu Ser Thr Pro Val Leu Thr
85 90 95
Ser Leu Gln Gly Ser Lys Ile Thr Val Ser Gly Lys Asn Asp Thr Glu
100 105 110
Leu Leu Lys Asp Val Asn Val Leu Lys Val Asn Asn Ala Thr Val Ile
115 120 125
Val Glu Ser Asp Ile Glu Thr Thr Asn Gly Val Ile His Val Ile Asp
130 135 140
Arg Val Leu Leu Pro
145

<210> 45
<211> 149
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Fasciclin
domain sequence

CURA2221.APP

<400> 45

Ala Gly Thr Val Met Glu Lys Leu Lys Thr Asp Pro Arg Phe Ser Thr
 1 5 10 15
 Leu Val Ala Ala Leu Glu Ala Ala Asp Leu Val Glu Thr Leu Asn Asn
 20 25 30
 Ser Gly Asp Phe Thr Val Phe Ala Pro Thr Asn Asp Ala Phe Gln Lys
 35 40 45
 Leu Pro Ala Gly Asp Leu Lys Thr Leu Asp Glu Leu Leu Asn Lys Glu
 50 55 60
 Asp Ala Lys Gln Leu Ala Lys Ile Leu Thr Tyr His Val Val Ala Gly
 65 70 75 80
 Lys Leu Ser Thr Ala Asp Leu Leu Ser Leu Ser Thr Pro Val Leu Thr
 85 90 95
 Ser Leu Gln Gly Ser Lys Ile Thr Val Ser Gly Lys Asn Asp Thr Glu
 100 105 110
 Leu Leu Lys Asp Val Asn Val Leu Lys Val Asn Asn Ala Thr Val Ile
 115 120 125
 Val Glu Ser Asp Ile Glu Thr Thr Asn Gly Val Ile His Val Ile Asp
 130 135 140
 Arg Val Leu Leu Pro
 145

<210> 46

<211> 104

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: XLINK domain sequence

<400> 46

Gly Glu Val Phe His Tyr Arg Ala Pro Ser Gly Arg Tyr Lys Leu Thr
 1 5 10 15
 Phe Glu Glu Ala Gln Ala Ala Cys Leu Arg Gln Gly Ala Arg Ile Ala
 20 25 30
 Thr Thr Gly Gln Leu Tyr Ala Ala Trp Lys Gly Gly Phe Asp Gln Cys
 35 40 45
 Asp Ala Gly Trp Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile Val Lys
 50 55 60
 Pro Arg Glu Asn Cys Gly Gly Asp Lys Asp Gly Phe Pro Gly Val Arg
 65 70 75 80
 Thr Tyr Tyr Leu Phe Pro Asn Gln Thr Gly Phe Pro Asp Asp Pro Ser
 85 90 95
 Ser Arg Tyr Asp Val Tyr Cys Phe
 100

<210> 47
 <211> 3567
 <212> PRT
 <213> Mus musculus

<400> 47

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Met Trp Ser Arg Leu Ala Phe Cys Cys Trp Ala Leu Ala Leu Val Ser
 1          5          10          15
Gly Trp Thr Asn Phe Gln Pro Val Ala Pro Ser Leu Asn Phe Ser Phe
          20          25          30
Arg Leu Phe Pro Glu Ala Ser Pro Gly Ala Leu Gly Arg Leu Ala Val
          35          40          45
Pro Pro Ala Ser Ser Glu Glu Glu Ala Ala Gly Ser Lys Val Glu Arg
 50          55          60
Leu Gly Arg Ala Phe Arg Ser Arg Val Arg Arg Leu Arg Glu Leu Ser
 65          70          75
Gly Ser Leu Glu Leu Val Phe Leu Val Asp Glu Ser Ser Ser Val Gly
          85          90          95
Gln Thr Asn Phe Leu Asn Glu Leu Lys Phe Val Arg Lys Leu Leu Ser
          100          105          110
Asp Phe Pro Val Val Ser Thr Ala Thr Arg Val Ala Ile Val Thr Phe
          115          120          125
Ser Ser Lys Asn Asn Val Val Ala Arg Val Asp Tyr Ile Ser Thr Ser
          130          135          140
Arg Ala His Gln His Lys Cys Ala Leu Leu Ser Arg Glu Ile Pro Ala
          145          150          155          160
Ile Thr Tyr Arg Gly Gly Gly Thr Tyr Thr Lys Gly Ala Phe Gln Gln
          165          170          175
Ala Ala Gln Ile Leu Arg His Ser Arg Glu Asn Ser Thr Lys Val Ile
          180          185          190
Phe Leu Ile Thr Asp Gly Tyr Ser Asn Gly Gly Asp Pro Arg Pro Ile
          195          200          205
Ala Ala Ser Leu Arg Asp Phe Gly Val Glu Ile Phe Thr Phe Gly Ile
          210          215          220
Trp Gln Gly Asn Ile Arg Glu Leu Asn Asp Met Ala Ser Thr Pro Lys
          225          230          235          240
Glu Glu His Cys Tyr Leu Leu His Ser Phe Glu Glu Phe Glu Ala Leu
          245          250          255
Ala Arg Arg Ala Leu His Glu Asp Leu Pro Ser Gly Ser Phe Ile Gln
          260          265          270
Glu Asp Met Ala Arg Cys Ser Tyr Leu Cys Glu Ala Gly Lys Asp Cys
          275          280          285
Cys Asp Arg Met Ala Ser Cys Lys Cys Gly Thr His Thr Gly Gln Phe

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290 295 300
 Glu Cys Ile Cys Glu Lys Gly Tyr Tyr Gly Lys Gly Leu Gln His Glu
 305 310 315 320
 Cys Thr Ala Cys Pro Ser Gly Thr Tyr Lys Pro Glu Ala Ser Pro Gly
 325 330 335
 Gly Ile Ser Thr Cys Ile Pro Cys Pro Asp Val Ser His Thr Ser Pro
 340 345 350
 Pro Gly Ser Thr Ser Pro Glu Asp Cys Val Cys Arg Glu Gly Tyr Gln
 355 360 365
 Arg Ser Gly Gln Thr Cys Glu Val Val His Cys Pro Ala Leu Lys Pro
 370 375 380
 Pro Glu Asn Gly Phe Phe Ile Gln Asn Thr Cys Lys Asn His Phe Asn
 385 390 395 400
 Ala Ala Cys Gly Val Arg Cys Arg Pro Gly Phe Asp Leu Val Gly Ser
 405 410 415
 Ser Ile His Leu Cys Gln Pro Asn Gly Leu Trp Ser Gly Thr Glu Ser
 420 425 430
 Phe Cys Arg Val Arg Thr Cys Pro His Leu Arg Gln Pro Lys His Gly
 435 440 445
 His Ile Ser Cys Ser Thr Ala Glu Met Ser Tyr Asn Thr Leu Cys Leu
 450 455 460
 Val Thr Cys Asn Glu Gly Tyr Arg Leu Glu Gly Ser Thr Arg Leu Thr
 465 470 475 480
 Cys Gln Gly Asn Ala Gln Trp Asp Gly Pro Glu Pro Arg Cys Val Glu
 485 490 495
 Arg His Cys Ala Thr Phe Gln Lys Pro Lys Gly Val Ile Ile Ser Pro
 500 505 510
 Pro Ser Cys Gly Lys Gln Pro Ala Arg Pro Gly Met Thr Cys Gln Leu
 515 520 525
 Ser Cys Arg Gln Gly Tyr Ile Leu Ser Gly Val Arg Glu Val Arg Cys
 530 535 540
 Ala Thr Ser Gly Lys Trp Ser Ala Lys Val Gln Thr Ala Val Cys Lys
 545 550 555 560
 Asp Val Glu Ala Pro Gln Ile Ser Cys Pro Asn Asp Ile Glu Ala Lys
 565 570 575
 Thr Gly Glu Gln Gln Asp Ser Ala Asn Val Thr Trp Gln Val Pro Thr
 580 585 590
 Ala Lys Asp Asn Ser Gly Glu Lys Val Ser Val His Val His Pro Ala
 595 600 605
 Phe Thr Pro Pro Tyr Leu Phe Pro Ile Gly Asp Val Ala Ile Thr Tyr
 610 615 620
 Thr Ala Thr Asp Ser Ser Gly Asn Gln Ala Ser Cys Thr Phe Tyr Ile

625		630		635		640
Lys Val Ile Asp Val	Glu Pro Pro Val	Ile Asp Trp Cys Arg Ser Pro				
	645	650				
Pro Pro Ile Gln Val Val	Glu Lys Glu His Pro Ala Ser Trp Asp Glu					
	660	665			670	
Pro Gln Phe Ser Asp Asn Ser	Gly Ala Glu Leu Val Ile Thr Ser Ser					
	675	680			685	
His Thr Gln Gly Asp Met Phe	Pro His Gly Glu Thr Val Val Trp Tyr					
	690	695		700		
Thr Ala Thr Asp Pro Ser	Gly Asn Asn Arg Thr Cys Asp Ile His Ile					
	705	710		715		720
Val Ile Lys Gly Ser Pro	Cys Glu Val Pro Phe Thr Pro Val Asn Gly					
	725	730			735	
Asp Phe Ile Cys Ala Gln Asp Ser	Ala Gly Val Asn Cys Ser Leu Ser					
	740	745			750	
Cys Lys Glu Gly Tyr Asp Phe	Thr Glu Gly Ser Thr Glu Lys Tyr Tyr					
	755	760			765	
Cys Ala Phe Glu Asp Gly Ile	Trp Arg Pro Pro Tyr Ser Thr Glu Trp					
	770	775		780		
Pro Asp Cys Ala Ile Lys	Arg Phe Ala Asn His Gly Phe Lys Ser Phe					
	785	790		795		800
Glu Met Leu Tyr Lys Thr Thr	Arg Cys Asp Asp Met Asp Leu Phe Lys					
	805	810			815	
Lys Phe Ser Ala Ala Phe	Glu Thr Thr Leu Gly Asn Met Val Pro Ser					
	820	825			830	
Phe Cys Asn Asp Ala Asp Asp	Ile Asp Cys Arg Leu Glu Asp Leu Thr					
	835	840			845	
Lys Lys Tyr Cys Ile Glu Tyr	Asn Tyr Asn Tyr Glu Asn Gly Phe Ala					
	850	855		860		
Ile Gly Pro Gly Gly Trp	Gly Ala Gly Asn Arg Leu Asp Tyr Ser Tyr					
	865	870		875		880
Asp His Phe Leu Asp Val Val	Gln Glu Thr Pro Thr Asp Val Gly Lys					
	885	890			895	
Ala Arg Ser Ser Arg Ile Lys	Arg Thr Val Pro Leu Ser Asp Pro Lys					
	900	905			910	
Ile Gln Leu Ile Phe Asn Ile	Thr Ala Ser Val Pro Leu Pro Glu Glu					
	915	920			925	
Arg Asn Asp Thr Leu Glu Leu	Glu Asn Gln Gln Arg Leu Ile Lys Thr					
	930	935		940		
Leu Glu Thr Ile Thr Asn Arg	Leu Lys Ser Thr Leu Asn Lys Glu Pro					
	945	950		955		960
Met Tyr Ser Phe Gln Leu Ala	Ser Glu Thr Val Val Ala Asp Ser Asn					

965 970 975
 Ser Leu Glu Thr Glu Lys Ala Phe Leu Phe Cys Arg Pro Gly Ser Val
 980 985 990
 Leu Arg Gly Arg Met Cys Val Asn Cys Pro Leu Gly Thr Ser Tyr Ser
 995 1000 1005
 Leu Glu His Ser Thr Cys Glu Ser Cys Leu Met Gly Ser Tyr Gln Asp
 1010 1015 1020
 Glu Glu Gly Gln Leu Glu Cys Lys Leu Cys Pro Pro Arg Thr His Thr
 1025 1030 1035 1040
 Glu Tyr Leu His Ser Arg Ser Val Ser Glu Cys Lys Ala Gln Cys Lys
 1045 1050 1055
 Gln Gly Thr Tyr Ser Ser Ser Gly Leu Glu Thr Cys Glu Ser Cys Pro
 1060 1065 1070
 Leu Gly Thr Tyr Gln Pro Glu Phe Gly Ser Arg Ser Cys Leu Leu Cys
 1075 1080 1085
 Pro Glu Thr Thr Thr Thr Val Lys Arg Gly Ala Val Asp Ile Ser Ala
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 Gly Tyr Met Gly Val His Cys Glu Thr Asp Val Asn Glu Cys Gln Ser
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 Leu Pro His Cys Glu Arg Ile Arg Cys Gly Leu Pro Pro Ala Leu Glu
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 Cys Thr Asp Asn Gly Ser Trp Asn Gly Ile Ser Pro Ser Cys Leu Asp
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 Gln Gly Pro Ser Leu Leu Glu Cys Thr Ala Ser Gly Ser Trp Asp Arg
 1940 1945 1950
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 1955 1960 1965
 Lys Asp Ala Val Ile Thr Gly Ser Asn Phe Thr Phe Gly Asn Thr Val

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Ala Arg Ser Arg Ile Cys Leu Thr Asn Gly Ser Trp Ser Gly Ala Thr
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 His Gly Asn Pro Ser Arg Arg Cys Leu Pro Asn Gly Ser Trp Ser Gly
 85 90 95
 Ser Ser Pro Ser Cys Leu Pro Cys Arg Cys Ser Thr Pro Ile Ile Gln
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 Gln Gly Thr Ile Asn Ala Thr Asp Leu Gly Cys Gly Lys Thr Val Gln
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 Asp Thr Phe Thr Cys Gln Gln Asp Gly His Trp Val Pro Glu Arg Ile
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 Phe Thr His Glu Gly Val Asn Trp Ser Thr Cys Gln Pro Asp Gly Thr
 245 250 255
 Trp Glu Pro Pro Phe Ser Asp Glu Ser Cys Ile Pro Val Val Cys Gly
 260 265 270
 His Pro Glu Ser Pro Ala His Gly Ser Val Val Gly Asn Lys His Ser
 275 280 285
 Phe Gly Ser Thr Ile Val Tyr Gln Cys Asp Pro Gly Tyr Lys Leu Glu
 290 295 300
 Gly Asn Arg Glu Arg Ile Cys Gln Glu Asn Arg Gln Trp Ser Gly Glu
 305 310 315 320
 Val Ala Val Cys Arg Glu Asn Arg Cys Glu Thr Pro Ala Glu Phe Pro
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325 330 335
 Asn Gly Lys Ala Val Leu Glu Asn Thr Thr Ser Gly Pro Ser Leu Leu
 340 345 350
 Phe Ser Cys His Arg Gly Tyr Thr Leu Glu Gly Ser Pro Glu Ala His
 355 360 365
 Cys Thr Ala Asn Gly Thr Trp Asn His Leu Thr Pro Leu Cys Lys Pro
 370 375 380
 Asn Pro Cys Pro Val Pro Phe Val Ile Pro Glu Asn Ala Val Leu Ser
 385 390 395 400
 Glu Lys Glu Phe Tyr Val Asp Gln Asn Val Ser Ile Lys Cys Arg Glu
 405 410 415
 Gly Phe Leu Leu Lys Gly Asn Gly Val Ile Thr Cys Ser Pro Asp Glu
 420 425 430
 Thr Trp Thr His Thr Asn Ala Arg Cys Glu Lys Ile Ser Cys Gly Pro
 435 440 445
 Pro Ser His Val Glu Asn Ala Ile Ala Arg Gly Val Tyr Tyr Gln Tyr
 450 455 460
 Gly Asp Met Ile Thr Tyr Ser Cys Tyr Ser Gly Tyr Met Leu Glu Gly
 465 470 475 480
 Ser Leu Arg Ser Val Cys Leu Glu Asn Gly Thr Trp Thr Pro Ser Pro
 485 490 495
 Val Cys Arg Ala Val Cys Arg Phe Pro Cys Gln Asn Gly Gly Val Cys
 500 505 510
 Gln Arg Pro Asn Ala Cys Ser Cys Pro Asp Gly Trp Met Gly Arg Leu
 515 520 525
 Cys Glu Glu Pro Ile Cys Ile Leu Pro Cys Leu Asn Gly Gly Arg Cys
 530 535 540
 Val Ala Pro Tyr Gln Cys Asp Cys Pro Thr Gly Trp Thr Gly Ser Arg
 545 550 555 560
 Cys His Thr Ala Thr Cys Gln Ser Pro Cys Leu Asn Gly Gly Lys Cys
 565 570 575
 Ile Arg Pro Asn Arg Cys His Cys Leu Ser Ala Trp Thr Gly His Asp
 580 585 590
 Cys Ser Arg Lys Arg Arg Ala Gly Leu
 595 600

<210> 51
 <211> 481
 <212> PRT
 <213> Homo sapiens

<400> 51
 Met Lys Gly Glu Asn Phe Glu Val Gly Ser Lys Val Gln Phe Phe Cys
 1 5 10 15

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Asn	Glu	Gly	Tyr	Glu	Leu	Val	Gly	Asp	Ser	Ser	Trp	Thr	Cys	Gln	Lys
			20					25					30		
Ser	Gly	Lys	Trp	Asn	Lys	Lys	Ser	Asn	Pro	Lys	Cys	Met	Pro	Ala	Lys
		35					40					45			
Cys	Pro	Glu	Pro	Pro	Leu	Leu	Glu	Asn	Gln	Leu	Val	Leu	Lys	Glu	Leu
	50					55					60				
Thr	Thr	Glu	Val	Gly	Val	Val	Thr	Phe	Ser	Cys	Lys	Glu	Gly	His	Val
	65				70					75					80
Leu	Gln	Gly	Pro	Ser	Val	Leu	Lys	Cys	Leu	Pro	Ser	Gln	Gln	Trp	Asn
				85					90					95	
Asp	Ser	Phe	Pro	Val	Cys	Lys	Ile	Val	Leu	Cys	Thr	Pro	Pro	Pro	Leu
			100					105					110		
Ile	Ser	Phe	Gly	Val	Pro	Ile	Pro	Ser	Ser	Ala	Leu	His	Phe	Gly	Ser
		115					120					125			
Thr	Val	Lys	Tyr	Ser	Cys	Val	Gly	Gly	Phe	Phe	Leu	Arg	Gly	Asn	Ser
	130					135					140				
Thr	Thr	Leu	Cys	Gln	Pro	Asp	Gly	Thr	Trp	Ser	Ser	Pro	Leu	Pro	Glu
	145				150					155					160
Cys	Val	Pro	Val	Glu	Cys	Pro	Gln	Pro	Glu	Glu	Ile	Pro	Asn	Gly	Ile
				165					170					175	
Ile	Asp	Val	Gln	Gly	Leu	Ala	Tyr	Leu	Ser	Thr	Ala	Leu	Tyr	Thr	Cys
			180					185					190		
Lys	Pro	Gly	Phe	Glu	Leu	Val	Gly	Asn	Thr	Thr	Thr	Leu	Cys	Gly	Glu
		195					200					205			
Asn	Gly	His	Trp	Leu	Gly	Gly	Lys	Pro	Thr	Cys	Lys	Ala	Ile	Glu	Cys
	210					215					220				
Leu	Lys	Pro	Lys	Glu	Ile	Leu	Asn	Gly	Lys	Phe	Ser	Tyr	Thr	Asp	Leu
	225				230					235					240
His	Tyr	Gly	Gln	Thr	Val	Thr	Tyr	Ser	Cys	Asn	Arg	Gly	Phe	Arg	Leu
				245					250					255	
Glu	Gly	Pro	Ser	Ala	Leu	Thr	Cys	Leu	Glu	Thr	Gly	Asp	Trp	Asp	Val
			260					265					270		
Asp	Ala	Pro	Ser	Cys	Asn	Ala	Ile	His	Cys	Asp	Ser	Pro	Gln	Pro	Ile
		275					280					285			
Glu	Asn	Gly	Phe	Val	Glu	Gly	Ala	Asp	Tyr	Ser	Tyr	Gly	Ala	Ile	Ile
	290					295					300				
Ile	Tyr	Ser	Cys	Phe	Pro	Gly	Phe	Gln	Val	Ala	Gly	His	Ala	Met	Gln
	305				310					315					320
Thr	Cys	Glu	Glu	Ser	Gly	Trp	Ser	Ser	Ser	Ile	Pro	Thr	Cys	Met	Pro
				325					330					335	
Ile	Asp	Cys	Gly	Leu	Pro	Pro	His	Ile	Asp	Phe	Gly	Ala	Cys	Thr	Lys
			340					345					350		

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Leu Lys Asp Ala Arg Asp Ile Leu Ser Lys Lys Arg His Asp Gly Ser
 355 360 365
 Ser Ile Cys Asp Ser Ser Pro Ser Leu Ser Phe Gly Ala Val Ala Lys
 370 375 380
 Thr Trp Glu Asn Thr Lys Glu Ser Pro Ala Thr His Ser Ser Asn Phe
 385 390 395 400
 Leu Tyr Gly Thr Met Val Ser Tyr Thr Cys Asn Pro Gly Tyr Glu Leu
 405 410 415
 Leu Gly Asn Pro Val Leu Ile Cys Gln Glu Asp Gly Thr Trp Asn Gly
 420 425 430
 Ser Ala Pro Ser Cys Ile Ser Ile Glu Cys Asp Leu Pro Thr Ala Pro
 435 440 445
 Glu Asn Gly Phe Leu Arg Phe Thr Glu Thr Ser Met Gly Ser Ala Val
 450 455 460
 Gln Tyr Ser Cys Lys Pro Gly His Ile Leu Ala Gly Ser Asp Leu Arg
 465 470 475 480
 Leu

<210> 52
 <211> 200
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Von
 willebrand Factor Type A domain sequence

<400> 52
 Asp Ile Val Phe Leu Leu Asp Gly Ser Gly Ser Ile Gly Ser Gln Asn
 1 5 10 15
 Phe Glu Arg Val Lys Asp Phe Val Glu Arg Val Val Glu Arg Leu Asp
 20 25 30
 Val Gly Pro Arg Asp Lys Lys Glu Glu Asp Ala Val Arg Val Gly Leu
 35 40 45
 Val Gln Tyr Ser Asp Asn Val Arg Thr Glu Ile Lys Phe Lys Leu Asn
 50 55 60
 Asp Tyr Gln Asn Lys Asp Glu Val Leu Gln Ala Leu Gln Lys Ile Arg
 65 70 75 80
 Tyr Glu Asp Tyr Tyr Gly Gly Gly Gly Thr Asn Thr Gly Ala Ala Leu
 85 90 95
 Gln Tyr Val Val Arg Asn Leu Phe Thr Glu Ala Ser Gly Ser Arg Ile
 100 105 110
 Glu Pro Val Ala Glu Glu Gly Ala Pro Lys Val Leu Val Val Leu Thr
 115 120 125
 Asp Gly Arg Ser Gln Asp Asp Pro Ser Pro Thr Ile Asp Ile Arg Asp

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130 135 140
 Val Leu Asn Glu Leu Lys Lys Glu Ala Gly Val Glu Val Phe Ala Ile
 145 150 155 160
 Gly Val Gly Asn Ala Asp Asn Asn Asn Leu Glu Glu Leu Arg Glu Ile
 165 170 175
 Ala Ser Lys Pro Asp Asp His Val Phe Lys Val Ser Asp Phe Glu Ala
 180 185 190
 Leu Asp Thr Leu Gln Glu Leu Leu
 195 200

<210> 53
 <211> 147
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Pentaxin
 domain sequence

<400> 53
 Ser Tyr Ala Thr Lys Lys Pro Leu Lys Asp Asn Glu Leu Leu Ile Phe
 1 5 10 15
 Lys Glu Lys Asp Gly Gln Tyr Ser Leu Tyr Val Gly Gly Ala Pro Gln
 20 25 30
 Leu Glu Val Thr Phe Lys Val Lys Glu Glu Phe Val Ala Pro Val His
 35 40 45
 Ile Cys Thr Ser Trp Glu Ser Ser Ser Gly Ile Ala Glu Phe Trp Val
 50 55 60
 Asp Gly Lys His Cys Pro Trp Val Arg Lys Gly Leu Lys Lys Gly Tyr
 65 70 75 80
 Thr Val Gly Ala Glu Pro Ser Ile Ile Leu Gly Gln Glu Gln Asp Ser
 85 90 95
 Tyr Gly Gly Gly Phe Asp Lys Ser Gln Ser Leu Val Gly Glu Ile Gly
 100 105 110
 Asp Leu Asn Met Trp Asp Tyr Val Leu Thr Pro Glu Glu Ile Lys Thr
 115 120 125
 Val Tyr Lys Gly Ala Gly Pro Leu Glu Arg His Ile Tyr Pro Asn Ile
 130 135 140
 Leu Asp Trp
 145

<210> 54
 <211> 62
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Sushi domain
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sequence

<400> 54

Cys Pro Pro Pro Asp Ile Glu Asn Gly Arg Val Ser Ser Ser Gly Thr
 1 5 10 15
 Tyr Glu Tyr Pro Val Gly Asp Thr Val Thr Tyr Thr Cys Asn Glu Gly
 20 25 30
 Tyr Arg Leu Val Gly Ser Ser Ser Ile Thr Cys Thr Glu Asp Gly Gly
 35 40 45
 Gly Gly Trp Ser Pro Pro Leu Leu Gly Glu Leu Pro Lys Cys
 50 55 60

<210> 55

<211> 207

<212> PRT

<213> Homo sapiens

<400> 55

Met Gly Ser Cys Ser Gly Arg Cys Ala Leu Val Val Leu Cys Ala Phe
 1 5 10 15
 Gln Leu Val Ala Ala Leu Glu Arg Gln Val Phe Asp Phe Leu Gly Tyr
 20 25 30
 Gln Trp Ala Pro Ile Leu Ala Asn Phe Val His Ile Ile Ile Val Ile
 35 40 45
 Leu Gly Leu Phe Gly Thr Ile Gln Tyr Arg Leu Arg Tyr Val Met Tyr
 50 55 60
 Thr Leu Trp Ala Ala Val Trp Val Thr Trp Asn Val Phe Ile Ile Cys
 65 70 75 80
 Phe Tyr Leu Glu Val Gly Gly Leu Leu Lys Asp Ser Glu Leu Leu Thr
 85 90 95
 Phe Ser Leu Ser Arg His Arg Ser Trp Trp Arg Glu Arg Trp Pro Gly
 100 105 110
 Cys Leu His Glu Glu Val Pro Ala Val Gly Leu Gly Ala Pro His Gly
 115 120 125
 Gln Ala Leu Val Ser Gly Ala Gly Cys Ala Leu Glu Pro Ser Tyr Val
 130 135 140
 Glu Ala Leu His Ser Cys Leu Gln Ile Leu Ile Ala Leu Leu Gly Phe
 145 150 155 160
 Val Cys Gly Cys Gln Val Val Ser Val Phe Thr Glu Glu Glu Asp Ser
 165 170 175
 Phe Asp Phe Ile Gly Gly Phe Asp Pro Phe Pro Leu Tyr His Val Asn
 180 185 190
 Glu Lys Pro Ser Ser Leu Leu Ser Lys Gln Val Tyr Leu Pro Ala
 195 200 205

<210> 56

<211> 208
 <212> PRT
 <213> Mus musculus

<400> 56
 Met Gly Phe Cys Ser Gly Arg Cys Thr Leu Leu Ala Leu Cys Ala Leu
 1 5 10 15
 Gln Leu Val Thr Ala Leu Glu Arg Gln Val Phe Asp Phe Leu Gly Tyr
 20 25 30
 Gln Trp Ala Pro Ile Leu Ala Asn Phe Thr His Ile Ile Val Val Ile
 35 40 45
 Leu Gly Leu Phe Gly Thr Ile Gln Tyr Arg Pro Arg Tyr Ile Val Val
 50 55 60
 Tyr Val Val Trp Ala Ala Val Trp Val Thr Trp Asn Val Phe Ile Ile
 65 70 75 80
 Cys Phe Tyr Leu Glu Val Gly Gly Leu Ser Lys Asp Ser Glu Leu Leu
 85 90 95
 Thr Phe Asn Leu Ser Gly His Arg Ser Trp Trp Glu Glu His Gly Pro
 100 105 110
 Gly Cys Leu His Glu Glu Glu Ala Thr Ala Gly Leu Gly Ala Leu His
 115 120 125
 Gly Gln Ser Leu Val Val Gly Ala Gly Cys Ala Met Val His Ser Tyr
 130 135 140
 Val Glu Ala Leu His Ser Gly Leu Gln Ile Leu Leu Ala Leu Leu Gly
 145 150 155 160
 Phe Val Tyr Gly Cys Tyr Val Val Ser Val Leu Thr Glu Glu Glu Asp
 165 170 175
 Ser Phe Asp Phe Ile Gly Gly Phe Asp Pro Phe Pro Leu Tyr His Val
 180 185 190
 Asn Glu Lys Pro Ser Ser Leu Leu Ser Lys Gln Ala Tyr Leu Pro Ala
 195 200 205

<210> 57
 <211> 208
 <212> PRT
 <213> Mus musculus

<400> 57
 Met Gly Phe Cys Ser Gly Arg Cys Thr Leu Leu Ala Leu Cys Arg Leu
 1 5 10 15
 Gln Leu Val Thr Ala Leu Glu Arg Gln Val Phe Asp Phe Leu Gly Tyr
 20 25 30
 Gln Trp Ala Pro Ile Leu Ala Asn Phe Thr His Ile Ile Val Val Ile
 35 40 45

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Leu Gly Leu Phe Gly Thr Ile Gln Tyr Arg Pro Arg Tyr Ile Val Val
50 55 60

Tyr Val Val Trp Ala Ala Val Trp Val Thr Trp Asn Val Phe Ile Ile
65 70 75 80

Cys Phe Tyr Leu Glu Val Gly Gly Leu Ser Lys Asp Ser Glu Leu Leu
85 90 95

Thr Phe Asn Leu Ser Gly His Arg Ser Trp Trp Glu Glu His Gly Pro
100 105 110

Gly Cys Leu His Glu Glu Glu Ala Thr Ala Gly Leu Gly Ala Leu His
115 120 125

Gly Gln Ser Leu Val Val Gly Ala Gly Cys Ala Met Val His Ser Tyr
130 135 140

Val Glu Ala Leu His Ser Gly Leu Gln Ile Leu Leu Ala Leu Leu Gly
145 150 155 160

Phe Val Tyr Gly Cys Tyr Val Val Ser Val Leu Thr Glu Glu Glu Asp
165 170 175

Ser Phe Asp Phe Ile Gly Gly Phe Asp Pro Phe Pro Leu Tyr His Val
180 185 190

Asn Glu Lys Pro Ser Ser Leu Leu Ser Lys Gln Ala Tyr Leu Pro Ala
195 200 205

<210> 58
<211> 208
<212> PRT
<213> Mus musculus

<400> 58
Met Gly Phe Cys Ser Gly Arg Cys Thr Leu Leu Ala Leu Cys Ala Leu
1 5 10 15

Gln Leu Val Thr Ala Leu Glu Arg Gln Val Phe Asp Phe Leu Gly Tyr
20 25 30

Gln Trp Ala Pro Ile Leu Ala Asn Phe Thr His Ile Ile Val Val Ile
35 40 45

Leu Gly Leu Phe Gly Thr Ile Gln Tyr Arg Pro Arg Tyr Ile Val Val
50 55 60

Tyr Val Val Trp Ala Ala Val Trp Val Thr Trp Asn Val Phe Ile Ile
65 70 75 80

Cys Phe Tyr Leu Glu Val Gly Gly Leu Ser Lys Asp Ser Glu Leu Leu
85 90 95

Thr Phe Asn Leu Ser Gly His Arg Ser Trp Trp Glu Glu His Gly Pro
100 105 110

Gly Cys Leu His Glu Glu Glu Ala Thr Ala Gly Leu Gly Ala Leu His
115 120 125

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Gly Gln Ser Leu Val Val Gly Ala Gly Cys Ala Met Val His Ser Tyr
 130 135 140
 Val Glu Ala Leu His Ser Gly Leu Gln Ile Leu Leu Ala Leu Leu Gly
 145 150 155 160
 Phe Val Tyr Gly Cys Tyr Val Val Arg Val Leu Thr Glu Glu Glu Asp
 165 170 175
 Ser Phe Asp Phe Ile Gly Gly Phe Asp Pro Phe Pro Leu Tyr His Val
 180 185 190
 Asn Glu Lys Pro Ser Ser Leu Leu Ser Lys Gln Ala Tyr Leu Pro Ala
 195 200 205

<210> 59
 <211> 207
 <212> PRT
 <213> Mus musculus

<400> 59
 Met Gly Lys Cys Ser Gly Arg Cys Thr Leu Val Ala Phe Cys Cys Leu
 1 5 10 15
 Gln Leu Val Ala Ala Leu Gln Arg Gln Ile Phe Asp Phe Leu Gly Tyr
 20 25 30
 Gln Trp Ala Pro Ile Leu Ala Asn Phe Leu His Ile Met Ala Val Ile
 35 40 45
 Leu Gly Ile Phe Gly Thr Val Gln Tyr Arg Ser Arg Tyr Leu Ile Leu
 50 55 60
 Tyr Ala Ala Trp Leu Val Leu Trp Val Gly Trp Asn Ala Phe Ile Ile
 65 70 75 80
 Cys Phe Tyr Leu Glu Val Gly Gln Leu Ser Gln Asp Arg Asp Phe Ile
 85 90 95
 Met Thr Phe Asn Thr Ser Leu His Arg Ser Trp Trp Met Glu Asn Gly
 100 105 110
 Pro Gly Cys Leu Val Thr Pro Val Leu Asn Ser Arg Leu Ala Leu Glu
 115 120 125
 Asp His His Val Ile Ser Val Thr Gly Cys Leu Leu Asp Tyr Pro Tyr
 130 135 140
 Ile Glu Ala Leu Ser Ser Ala Leu Gln Ile Phe Leu Ala Leu Phe Gly
 145 150 155 160
 Phe Val Phe Ala Cys Tyr Val Ser Lys Val Phe Leu Glu Glu Glu Asp
 165 170 175
 Ser Phe Asp Phe Ile Gly Gly Phe Asp Ser Tyr Gly Tyr Gln Ala Pro
 180 185 190
 Gln Lys Thr Ser His Leu Gln Leu Gln Pro Leu Tyr Thr Ser Gly
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195

200

205

<210> 60
 <211> 367
 <212> PRT
 <213> Mus musculus

<400> 60

Met Trp Gly Ser Arg Ala Gln Gln Ser Gly Pro Asp Arg Gly Gly Ala
 1 5 10 15
 Cys Leu Leu Ala Ala Phe Leu Leu Cys Phe Ser Leu Leu His Ala Gln
 20 25 30
 Asp Tyr Thr Pro Ser Gln Thr Pro Pro Pro Thr Ser Asn Thr Ser Leu
 35 40 45
 Lys Pro Arg Gly Arg Val Gln Lys Glu Leu Cys Gly Lys Thr Lys Phe
 50 55 60
 Gln Gly Lys Ile Tyr Gly Gly Gln Ile Ala Lys Ala Glu Arg Trp Pro
 65 70 75 80
 Trp Gln Ala Ser Leu Ile Phe Arg Gly Arg His Ile Cys Gly Ala Val
 85 90 95
 Leu Ile Asp Lys Thr Trp Leu Leu Ser Ala Ala His Cys Phe Gln Arg
 100 105 110
 Ser Leu Thr Pro Ser Asp Tyr Arg Ile Leu Leu Gly Tyr Asn Gln Leu
 115 120 125
 Ser Asn Pro Ser Asn Tyr Ser Arg Gln Met Thr Val Asn Lys Val Ile
 130 135 140
 Leu His Glu Asp Tyr Ser Lys Leu Ser Arg Leu Glu Lys Asn Ile Val
 145 150 155 160
 Leu Ile Gln Leu His His Pro Val Ile Tyr Ser Thr His Ile Phe Pro
 165 170 175
 Ala Cys Val Pro Asp Gly Thr Thr Lys Val Ser Pro Asn Asn Leu Cys
 180 185 190
 Trp Ile Ser Gly Trp Gly Met Leu Ser Ala Asp Lys Phe Leu Gln Ala
 195 200 205
 Pro Phe Pro Leu Leu Asp Ala Glu Val Ser Leu Ile Asp Glu Glu Glu
 210 215 220
 Cys Thr Thr Phe Phe Gln Thr Pro Glu Val Ser Ile Thr Glu Tyr Asp
 225 230 235 240
 Val Ile Lys Asp Asp Val Leu Cys Ala Gly Asp Leu Thr Asn Gln Lys
 245 250 255
 Ser Ser Cys Arg Gly Asp Ser Gly Gly Pro Leu Val Cys Phe Leu Asn
 260 265 270
 Ser Phe Trp Tyr Val Val Gly Leu Ala Asn Trp Asn Gly Ala Cys Leu
 275 280 285

Glu Pro Ile His Ser Pro Asn Ile Phe Thr Lys Val Ser Tyr Phe Ser
 290 295 300
 Asp Trp Ile Lys Gln Lys Lys Ala Asn Thr Pro Ala Ala Asp Val Ser
 305 310 315 320
 Ser Ala Pro Leu Glu Glu Met Ala Ser Ser Leu Arg Gly Trp Gly Asn
 325 330 335
 Tyr Ser Ala Gly Ile Thr Leu Lys Pro Arg Ile Ser Thr Thr Leu Leu
 340 345 350
 Ser Ser Gln Ala Leu Leu Leu Gln Ser Ile Trp Leu Arg Ile Leu
 355 360 365

<210> 61
 <211> 366
 <212> PRT
 <213> Mus musculus

<400> 61
 Met Cys Gly Val Arg Ala Lys Lys Ser Gly Leu Ser Gly Tyr Gly Ala
 1 5 10 15
 Gly Leu Leu Ala Ala Leu Leu Gly Val Ser Phe Leu Ser Gln His Ala
 20 25 30
 Gln Thr Ala Glu Pro Thr Asn Val Thr Asn Ala Ala Asn Asn Thr Thr
 35 40 45
 Ile Gln Ile Met Lys Ser Thr Leu Ser Leu Ser Glu Val Cys Gly Lys
 50 55 60
 Thr Lys Phe Gln Gly Lys Ile Tyr Gly Gly Gln Ile Ala Gly Ala Glu
 65 70 75 80
 Arg Trp Pro Trp Gln Ala Ser Leu Arg Leu Tyr Gly Arg His Ile Cys
 85 90 95
 Gly Ala Val Leu Ile Asp Lys Asn Trp Val Leu Gly Ala Ala His Cys
 100 105 110
 Phe Gln Arg Ser Gln Glu Pro Ser Asp Tyr His Val Met Leu Gly Tyr
 115 120 125
 Thr Asp Leu Asn Ser Pro Thr Arg Tyr Ser Arg Thr Met Ser Val Gln
 130 135 140
 Lys Val Ile Val His Lys Asp Tyr Asn Arg Phe His Thr Gln Gly Ser
 145 150 155 160
 Asp Ile Val Leu Leu Gln Leu Arg Ser Ser Val Glu Tyr Ser Ser His
 165 170 175
 Ile Leu Pro Ala Cys Val Pro Glu Glu Asn Ile Lys Ile Pro Lys Glu
 180 185 190
 Lys Ala Cys Trp Ala Ser Gly Trp Gly Tyr Leu Arg Glu Asp Val Arg
 195 200 205
 Ile Pro Leu Pro Asn Glu Leu Tyr Glu Ala Glu Leu Ile Ile Met Ser
 210 215 220

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Asn Asp Gln Cys Lys Gly Phe Phe Pro Pro Pro Val Pro Gly Ser Ser
 225 230 235 240
 Arg Ser Tyr Tyr Ile Tyr Asp Asp Met Val Cys Ala Ala Asp Tyr Asp
 245 250 255
 Met Ser Lys Ser Ile Cys Ala Gly Asp Ser Gly Gly Pro Leu Val Cys
 260 265 270
 Leu Leu Glu Gly Ser Trp Tyr Val Val Gly Leu Thr Ser Trp Ser Ser
 275 280 285
 Thr Cys Glu Glu Pro Ile Val Ser Pro Ser Val Phe Ala Arg Val Ser
 290 295 300
 Tyr Phe Asp Lys Trp Ile Lys Asp Asn Lys Lys Ser Ser Ser Asn Ser
 305 310 315 320
 Lys Pro Gly Glu Ser Pro His His Pro Gly Ser Pro Glu Asn Glu Asn
 325 330 335
 Pro Glu Gly Asn Asn Lys Asn Gln Gly Thr Val Ile Lys Pro Val Cys
 340 345 350
 Thr Ala Leu Leu Leu Ser Gln Thr Leu Leu Gln Gln Leu Ile
 355 360 365

<210> 62
 <211> 143
 <212> PRT
 <213> Mus musculus

<400> 62

Met Leu Gly Tyr Thr Asp Leu Asn Ser Pro Thr Arg Tyr Ser Arg Thr
 1 5 10 15
 Met Ser Val Gln Lys Val Ile Val His Lys Asp Tyr Asn Arg Phe His
 20 25 30
 Thr Gln Gly Ser Asp Ile Val Leu Leu Gln Leu Arg Ser Ser Val Glu
 35 40 45
 Tyr Ser Ser His Ile Leu Pro Ala Cys Val Pro Glu Glu Asn Ile Lys
 50 55 60
 Ile Pro Lys Glu Lys Ala Cys Trp Ala Ser Gly Trp Gly Tyr Leu Arg
 65 70 75 80
 Glu Asp Val Arg Ile Pro Leu Pro Asn Glu Leu Tyr Glu Ala Glu Leu
 85 90 95
 Ile Ile Met Ser Asn Asp Gln Cys Lys Gly Phe Phe Pro Pro Pro Val
 100 105 110
 Pro Gly Ser Gly Arg Ser Tyr Tyr Ile Tyr Asp Asp Met Val Cys Ala
 115 120 125
 Ala Asp Tyr Asp Met Ser Lys Ser Ile Cys Ala Gly Leu Leu Leu
 130 135 140

<210> 63
 <211> 273
 <212> PRT
 <213> Ovis aries

<400> 63

Met Leu His Leu Leu Ala Leu Ala Leu Leu Leu Ser Leu Val Ser Ala
 1 5 10 15
 Ala Pro Ala Pro Gly Gln Ala Leu Gln Arg Ser Gly Ile Ile Gly Gly
 20 25 30
 Lys Glu Ala Pro Gly Ser Arg Trp Pro Trp Gln Val Ser Leu Arg Val
 35 40 45
 Arg Asp Gln Tyr Trp Arg His Gln Cys Gly Gly Ser Leu Ile His Pro
 50 55 60
 Gln Trp Val Leu Thr Ala Ala His Cys Ile Gly Pro Glu Leu Gln Glu
 65 70 75 80
 Pro Ser Asp Phe Arg Val Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln
 85 90 95
 Asp Arg Leu Leu Pro Ile Ser Arg Val Ile Pro His Pro His Tyr Tyr
 100 105 110
 Met Val Glu Asn Gly Ala Asp Ile Ala Leu Leu Gln Leu Glu Glu Pro
 115 120 125
 Val Ser Ile Ser Arg His Val Gln Pro Val Thr Leu Pro Pro Ala Ser
 130 135 140
 Glu Thr Phe Pro Pro Glu Ser Gln Cys Trp Val Thr Gly Trp Gly Asp
 145 150 155 160
 Val Asp Asn Gly Arg Pro Leu Pro Pro Pro Tyr Pro Leu Lys Gln Val
 165 170 175
 Lys Val Pro Ile Val Glu Asn Ser Val Cys Asp Trp Lys Tyr His Ser
 180 185 190
 Gly Leu Ser Thr Asp Tyr Ser Val Pro Ile Val Gln Glu Asp Asn Leu
 195 200 205
 Cys Ala Gly Asp Gly Gly Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly
 210 215 220
 Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln Ala Gly Val Val
 225 230 235 240
 Ser Trp Gly Asp Gly Cys Ala Lys Pro Asn Arg Pro Gly Ile Tyr Thr
 245 250 255
 Arg Ile Thr Ser Tyr Leu Asp Trp Ile His Gln Tyr Val Pro Gln Glu
 260 265 270
 Pro

<210> 64
 <211> 273

<212> PRT
 <213> Ovis aries

<400> 64

```

Met Leu His Leu Leu Ala Leu Ala Leu Leu Leu Ser Leu Val Ser Ala
 1           5           10
Ala Pro Gly Pro Gly Gln Ala Leu Gln Arg Ser Gly Ile Ile Gly Gly
          20           25           30
Lys Glu Ala Pro Gly Ser Arg Trp Pro Trp Gln Val Ser Leu Arg Val
          35           40           45
Arg Asp Gln Tyr Trp Arg His Gln Cys Gly Gly Ser Leu Ile His Pro
 50           55           60
Gln Trp Val Leu Thr Ala Ala His Cys Ile Gly Pro Glu Leu Gln Glu
 65           70           75           80
Pro Ser Asp Phe Arg Val Gln Leu Arg Glu Gln His Leu Tyr Tyr Gln
          85           90           95
Asp Arg Leu Leu Pro Ile Ser Arg Val Ile Pro His Pro His Tyr Tyr
          100          105          110
Met Val Glu Asn Gly Ala Asp Ile Ala Leu Leu Gln Leu Glu Glu Pro
          115          120          125
Val Ser Ile Ser Cys His Val Arg Pro Val Thr Leu Pro Pro Ala Ser
          130          135          140
Glu Thr Phe Pro Pro Gly Ser Gln Cys Trp Val Thr Gly Trp Gly Asn
145           150          155          160
Val Asp Asn Gly Arg Pro Leu Pro Pro Pro Tyr Pro Leu Lys Gln Val
          165          170          175
Lys Val Pro Ile Val Glu Asn Ser Val Cys Asp Trp Lys Tyr His Ser
          180          185          190
Gly Leu Ser Thr Asp Tyr Ser Val Pro Ile Val Gln Glu Asp Asn Leu
          195          200          205
Cys Ala Gly Asp Gly Gly Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly
          210          215          220
Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln Ala Gly Val Val
225           230          235          240
Ser Trp Gly Asp Gly Cys Ala Asn Pro Asp Tyr Pro Gly Val Tyr Thr
          245          250          255
Arg Ile Thr Ser Tyr Leu Asp Trp Ile His Gln Tyr Val Pro Gln Glu
          260          265          270

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Pro

<210> 65
 <211> 205
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Trypsin
Domian sequence

<400> 65

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Ser Ala Pro Ala Ser Ser Val Arg Val Ser Leu Ser Val Arg Leu Gly
 1          5          10          15
Glu His Asn Leu Ser Leu Thr Glu Gly Thr Glu Gln Lys Phe Asp Val
          20          25          30
Lys Lys Thr Ile Ile Val His Pro Asn Tyr Asn Pro Asp Thr Leu Asp
          35          40          45
Asn Gly Ala Tyr Asp Asn Asp Ile Ala Leu Leu Lys Leu Lys Ser Pro
          50          55          60
Gly Val Thr Leu Gly Asp Thr Val Arg Pro Ile Cys Leu Pro Ser Ala
          65          70          75          80
Ser Ser Asp Leu Pro Val Gly Thr Thr Cys Thr Val Ser Gly Trp Gly
          85          90          95
Arg Arg Pro Thr Lys Asn Leu Gly Leu Ser Asp Thr Leu Gln Glu Val
          100          105          110
Val Val Pro Val Val Ser Arg Glu Thr Cys Arg Ser Ala Tyr Glu Tyr
          115          120          125
Gly Gly Thr Asp Asp Lys Val Glu Phe Val Thr Asp Asn Met Ile Cys
          130          135          140
Ala Gly Ala Leu Gly Gly Lys Asp Ala Cys Gln Gly Asp Ser Gly Gly
          145          150          155          160
Pro Leu Val Cys Ser Asp Gly Asn Arg Asp Gly Arg Trp Glu Leu Val
          165          170          175
Gly Ile Val Ser Trp Gly Ser Tyr Gly Cys Ala Arg Gly Asn Lys Pro
          180          185          190
Gly Val Tyr Thr Arg Val Ser Ser Tyr Leu Asp Trp Ile
          195          200          205

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<210> 66

<211> 349

<212> PRT

<213> Homo sapiens

<400> 66

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Met Asn Arg Lys Ala Leu Arg Cys Leu Gly His Leu Phe Leu Ser Leu
 1          5          10          15
Gly Met Val Cys Leu Arg Ile Gly Gly Phe Ser Ser Val Val Ala Leu
          20          25          30
Gly Ala Thr Ile Ile Cys Asn Lys Ile Pro Gly Leu Ala Pro Arg Gln
          35          40          45
Arg Ala Ile Cys Gln Ser Arg Pro Asp Ala Ile Ile Val Ile Gly Glu
          50          55          60

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Gly Ser Gln Met Gly Leu Asp Glu Cys Gln Phe Gln Phe Arg Asn Gly
 65 70 75 80
 Arg Trp Asn Cys Ser Ala Leu Gly Glu Arg Thr Val Phe Gly Lys Glu
 85 90 95
 Leu Lys Val Gly Ser Arg Asp Gly Ala Phe Thr Tyr Ala Ile Ile Ala
 100 105 110
 Ala Gly Val Ala His Ala Ile Thr Ala Ala Cys Thr His Gly Asn Leu
 115 120 125
 Ser Asp Cys Gly Cys Asp Lys Glu Lys Gln Gly Gln Tyr His Arg Asp
 130 135 140
 Glu Gly Trp Lys Trp Gly Gly Cys Ser Ala Asp Ile Arg Tyr Gly Ile
 145 150 155 160
 Gly Phe Ala Lys Val Phe Val Asp Ala Arg Glu Ile Lys Gln Asn Ala
 165 170 175
 Arg Thr Leu Met Asn Leu His Asn Asn Glu Ala Gly Arg Lys Ile Leu
 180 185 190
 Glu Glu Asn Met Lys Leu Glu Cys Lys Cys His Gly Val Ser Gly Ser
 195 200 205
 Cys Thr Thr Lys Thr Cys Trp Thr Thr Leu Pro Gln Phe Arg Glu Leu
 210 215 220
 Gly Tyr Val Leu Lys Asp Lys Tyr Asn Glu Ala Val His Val Glu Pro
 225 230 235 240
 Val Arg Ala Ser Arg Asn Lys Arg Pro Thr Phe Leu Lys Ile Lys Lys
 245 250 255
 Pro Leu Ser Tyr Arg Lys Pro Met Asp Thr Asp Leu Val Tyr Ile Glu
 260 265 270
 Lys Ser Pro Asn Tyr Cys Glu Glu Asp Pro Val Thr Gly Ser Val Gly
 275 280 285
 Thr Gln Gly Arg Ala Cys Asn Lys Thr Ala Pro Gln Ala Ser Gly Cys
 290 295 300
 Asp Leu Met Cys Cys Gly Arg Gly Tyr Asn Thr His Gln Tyr Ala Arg
 305 310 315 320
 Val Trp Gln Cys Asn Cys Lys Phe His Trp Cys Cys Tyr Val Lys Cys
 325 330 335
 Asn Thr Cys Ser Glu Arg Thr Glu Met Tyr Thr Cys Lys
 340 345

<210> 67
 <211> 349
 <212> PRT
 <213> Homo sapiens

<400> 67
 Met Asn Arg Lys Ala Arg Arg Cys Leu Gly His Leu Phe Leu Ser Leu
 Page 146

1	5	10	15
Gly Met Val Tyr 20	Leu Arg Ile Gly Gly 25	Phe Ser Ser Val Val 30	Ala Leu
Gly Ala Ser 35	Ile Ile Cys Asn Lys 40	Ile Pro Gly Leu Ala 45	Pro Arg Gln
Arg Ala Ile Cys Gln Ser 50	Arg 55	Pro Asp Ala Ile Ile 60	Val Ile Gly Glu
Gly Ser Gln Met Gly 65	Leu Asp Glu Cys Gln Phe 70	Gln Phe Arg Asn Gly 75	80
Arg Trp Asn Cys Ser 85	Ala Leu Gly Glu Arg Thr Val Phe Gly Lys 90	95	Glu
Leu Lys Val Gly 100	Ser Arg Glu Ala Ala Phe Thr Tyr Ala Ile Ile Ala 105	110	
Ala Gly Val Ala His Ala Ile Thr Ala Ala Cys Thr Gln Gly Asn Leu 115	120	125	
Ser Asp Cys Gly Cys Asp Lys 130	135	Glu Lys Gln Gly Gln Tyr His Arg Asp 140	
Glu Gly Trp Lys Trp Gly 145	150	Gly Cys Ser Ala Asp Ile Arg Tyr Gly Ile 155	160
Gly Phe Ala Lys Val Phe Val Asp Ala Arg Glu Ile Lys Gln Asn Ala 165	170	175	
Arg Thr Leu Met 180	Asn Leu His Asn Asn Glu Ala Gly Arg Lys Ile Leu 185	190	
Glu Glu Asn Met Lys Leu Glu Cys Lys Cys His Gly Val Ser Gly Ser 195	200	205	
Cys Thr Thr Lys Thr Cys Trp Thr Thr Leu Pro Gln Phe Arg Glu Leu 210	215	220	
Gly Tyr Val Leu Lys Asp Lys Tyr Asn Glu Ala Val His Val Glu Pro 225	230	235	240
Val Arg Ala Ser Arg Asn Lys Arg Pro Thr Phe Leu Lys Ile Lys Lys 245	250	255	
Pro Leu Ser Tyr Arg Lys Pro Met Asp Thr Asp Leu Val Tyr Ile Glu 260	265	270	
Lys Ser Pro Asn Tyr Cys Glu Glu Asp Pro Val Thr Gly Ser Val Gly 275	280	285	
Thr Gln Gly Arg Ala Cys Asn Lys Thr Ala Pro Gln Ala Ser Gly Cys 290	295	300	
Asp Leu Met Cys Cys Gly Arg Gly Tyr Asn Thr His Gln Tyr Ala Arg 305	310	315	320
Val Trp Gln Cys Asn Cys Lys Phe His Trp Cys Cys Tyr Val Lys Cys 325	330	335	
Asn Thr Cys Ser Glu Arg Thr Glu Met Tyr Thr Cys Lys			

340

345

<210> 68
 <211> 349
 <212> PRT
 <213> Mus musculus

<400> 68

Met Thr Arg Lys Ala Arg Arg Cys Leu Gly His Leu Phe Leu Ser Leu
 1 5 10 15
 Gly Ile Val Tyr Leu Arg Ile Gly Gly Phe Ser Ser Val Val Ala Leu
 20 25 30
 Gly Ala Ser Ile Ile Cys Asn Lys Ile Pro Gly Leu Ala Pro Arg Gln
 35 40 45
 Arg Ala Ile Cys Gln Ser Arg Pro Asp Ala Ile Ile Val Ile Gly Glu
 50 55 60
 Gly Ser Gln Met Gly Leu Asp Glu Cys Gln Phe Gln Phe Arg Asn Gly
 65 70 75 80
 Arg Trp Asn Cys Ser Ala Leu Gly Glu Arg Thr Val Phe Gly Lys Glu
 85 90 95
 Leu Lys Val Gly Ser Arg Glu Ala Ala Phe Thr Tyr Ala Ile Ile Ala
 100 105 110
 Ala Gly Val Ala His Ala Ile Thr Ala Ala Cys Thr Gln Gly Asn Leu
 115 120 125
 Ser Asp Cys Gly Cys Asp Lys Glu Lys Gln Gly Gln Tyr His Arg Asp
 130 135 140
 Glu Gly Trp Lys Trp Gly Gly Cys Ser Ala Asp Ile Arg Tyr Gly Ile
 145 150 155 160
 Gly Phe Ala Lys Val Phe Val Asp Ala Arg Glu Ile Lys Gln Asn Ala
 165 170 175
 Arg Thr Leu Met Asn Leu His Asn Asn Glu Ala Gly Arg Lys Ile Leu
 180 185 190
 Glu Glu Asn Met Lys Leu Glu Cys Lys Cys His Gly Val Ser Gly Ser
 195 200 205
 Cys Thr Thr Lys Thr Cys Trp Thr Thr Leu Pro Gln Phe Arg Glu Leu
 210 215 220
 Gly Tyr Val Leu Lys Asp Lys Tyr Asn Glu Ala Val His Val Glu Pro
 225 230 235 240
 Val Arg Ala Ser Arg Asn Lys Arg Pro Thr Phe Leu Lys Ile Lys Lys
 245 250 255
 Pro Leu Ser Tyr Arg Lys Pro Met Asp Thr Asp Leu Val Tyr Ile Glu
 260 265 270
 Lys Ser Pro Asn Tyr Cys Glu Glu Asp Pro Val Thr Gly Ser Val Gly
 275 280 285

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Thr	Gln	Gly	Arg	Ala	Cys	Asn	Lys	Thr	Ala	Pro	Gln	Ala	Ser	Gly	Cys
	290					295					300				
Asp	Leu	Met	Cys	Cys	Gly	Arg	Gly	Tyr	Asn	Thr	His	Gln	Tyr	Ala	Arg
305					310					315					320
Val	Trp	Gln	Cys	Asn	Cys	Lys	Phe	His	Trp	Cys	Cys	Tyr	Val	Lys	Cys
				325					330					335	
Asn	Thr	Cys	Ser	Glu	Arg	Thr	Glu	Met	Tyr	Thr	Cys	Lys			
			340					345							

<210> 69
 <211> 349
 <212> PRT
 <213> Mus musculus

<400> 69

Met	Thr	Arg	Lys	Ala	Arg	Arg	Cys	Leu	Gly	His	Leu	Phe	Leu	Ser	Leu
1				5					10					15	
Gly	Ile	Val	Tyr	Leu	Arg	Ile	Gly	Gly	Phe	Ser	Ser	Val	Val	Ala	Leu
		20					25						30		
Gly	Ala	Ser	Ile	Ile	Cys	Asn	Lys	Ile	Pro	Gly	Leu	Ala	Pro	Arg	Gln
		35					40					45			
Arg	Ala	Ile	Cys	Gln	Ser	Arg	Pro	Asp	Ala	Ile	Ile	Val	Ile	Gly	Glu
	50					55					60				
Gly	Ser	Gln	Met	Gly	Leu	Asp	Glu	Cys	Gln	Phe	Gln	Phe	Arg	Asn	Gly
65				70					75					80	
Arg	Trp	Asn	Cys	Ser	Ala	Leu	Gly	Glu	Arg	Thr	Val	Phe	Gly	Lys	Glu
			85					90					95		
Leu	Lys	Val	Gly	Ser	Arg	Glu	Ala	Ala	Phe	Thr	Tyr	Ala	Ile	Ile	Ala
		100					105						110		
Ala	Gly	Val	Ala	His	Ala	Ile	Thr	Ala	Ala	Cys	Thr	Gln	Gly	Asn	Leu
	115					120						125			
Ser	Asp	Cys	Gly	Cys	Asp	Lys	Glu	Lys	Gln	Gly	Gln	Tyr	His	Trp	Asp
130					135						140				
Glu	Gly	Trp	Lys	Trp	Gly	Gly	Cys	Ser	Ala	Asp	Ile	Arg	Tyr	Gly	Ile
145					150				155					160	
Gly	Phe	Ala	Lys	Val	Phe	Val	Asp	Ala	Arg	Glu	Ile	Lys	Gln	Asn	Ala
			165					170						175	
Arg	Thr	Leu	Met	Asn	Leu	His	Asn	Asn	Glu	Ala	Gly	Arg	Lys	Ile	Leu
		180					185						190		
Glu	Glu	Asn	Met	Lys	Leu	Glu	Cys	Lys	Cys	His	Gly	Val	Ser	Gly	Ser
		195					200					205			
Cys	Thr	Thr	Lys	Thr	Cys	Trp	Thr	Thr	Leu	Pro	Gln	Phe	Arg	Glu	Leu
	210					215					220				
Gly	Tyr	Val	Leu	Lys	Asp	Lys	Tyr	Asn	Glu	Ala	Val	His	Val	Glu	Pro
225					230					235				240	

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Val Arg Ala Ser Arg Asn Lys Arg Pro Thr Phe Leu Lys Ile Lys Lys
 245 250 255
 Pro Leu Ser Tyr Arg Lys Pro Met Asp Thr Asp Leu Val Tyr Ile Glu
 260 265 270
 Leu Ser Pro Asn Tyr Cys Glu Glu Asp Pro Val Thr Gly Ser Val Gly
 275 280 285
 Thr Gln Gly Arg Ala Cys Asn Lys Thr Ala Pro Gln Ala Ser Gly Cys
 290 295 300
 Asp Leu Met Cys Cys Gly Arg Gly Tyr Asn Thr His Gln Tyr Ala Arg
 305 310 315 320
 Val Trp Gln Cys Asn Cys Lys Phe His Trp Cys Cys Tyr Val Lys Cys
 325 330 335
 Asn Thr Cys Ser Glu Arg Thr Glu Met Tyr Thr Cys Lys
 340 345

<210> 70
 <211> 349
 <212> PRT
 <213> Gallus gallus

<400> 70
 Met Asn Arg Lys Thr Arg Arg Trp Ile Phe His Ile Phe Leu Ser Leu
 1 5 10 15
 Gly Ile Val Tyr Ile Lys Ile Gly Gly Phe Ser Ser Val Val Ala Leu
 20 25 30
 Gly Ala Ser Ile Ile Cys Asn Lys Ile Pro Gly Leu Ala Pro Arg Gln
 35 40 45
 Arg Ala Ile Cys Gln Ser Arg Pro Asp Ala Ile Ile Val Ile Gly Glu
 50 55 60
 Gly Ser Gln Met Gly Ile Asn Glu Cys Gln Phe Gln Phe Arg Asn Gly
 65 70 75 80
 Arg Trp Asn Cys Ser Ala Leu Gly Glu Arg Thr Val Phe Gly Lys Glu
 85 90 95
 Leu Lys Val Gly Ser Arg Glu Ala Ala Phe Thr Tyr Ala Ile Ile Ala
 100 105 110
 Ala Gly Val Ala His Ala Ile Thr Ala Ala Cys Thr Gln Gly Asn Leu
 115 120 125
 Ser Asp Cys Gly Cys Asp Lys Glu Lys Gln Gly Gln Tyr His Lys Glu
 130 135 140
 Glu Gly Trp Lys Trp Gly Gly Cys Ser Ala Asp Ile Arg Tyr Gly Ile
 145 150 155 160
 Gly Phe Ala Lys Val Phe Val Asp Ala Arg Glu Ile Lys Gln Asn Ala
 165 170 175
 Arg Thr Leu Met Asn Leu His Asn Asn Glu Ala Gly Arg Lys Ile Leu
 Page 150

180 185 190
 Glu Glu Asn Met Lys Leu Glu Cys Lys Cys His Gly Val Ser Gly Ser
 195 200 205
 Cys Thr Thr Lys Thr Cys Trp Thr Thr Leu Pro Lys Phe Arg Glu Leu
 210 215 220
 Gly Tyr Ile Leu Lys Asp Lys Tyr Asn Glu Ala Val Gln Val Glu Pro
 225 230 235 240
 Val Arg Ala Ser Arg Asn Lys Arg Pro Thr Phe Leu Lys Ile Lys Lys
 245 250 255
 Pro Leu Ser Tyr Arg Lys Pro Met Asp Thr Asp Leu Val Tyr Ile Glu
 260 265 270
 Lys Ser Pro Asn Tyr Cys Glu Glu Asp Pro Val Thr Gly Ser Val Gly
 275 280 285
 Thr Gln Gly Arg Met Cys Asn Lys Thr Ala Gln Gln Ser Asn Gly Cys
 290 295 300
 Asp Leu Met Cys Cys Gly Arg Gly Tyr Asn Thr His Gln Tyr Ser Arg
 305 310 315 320
 Val Trp Gln Cys Asn Cys Lys Phe His Trp Cys Cys Tyr Val Lys Cys
 325 330 335
 Asn Thr Cys Ser Glu Arg Thr Glu Val Tyr Thr Cys Lys
 340 345

<210> 71
 <211> 352
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: WNT domain
 sequence

<400> 71
 Leu Cys Arg Ser Leu Pro Gly Leu Ser Pro Arg Gln Arg Gln Leu Cys
 1 5 10 15
 Arg Arg Asn Pro Asp Val Met Ala Ser Val Ser Glu Gly Ala Gln Leu
 20 25 30
 Ala Ile Gln Glu Cys Gln His Gln Phe Arg Gly Arg Arg Trp Asn Cys
 35 40 45
 Ser Thr Leu Asp Ser Leu Asn Glu Arg Ser Val Phe Gly Lys Val Leu
 50 55 60
 Lys Lys Gly Thr Arg Glu Thr Ala Phe Val Tyr Ala Ile Ser Ser Ala
 65 70 75 80
 Gly Val Ala His Ala Val Thr Arg Ala Cys Ser Glu Gly Glu Leu Glu
 85 90 95
 Ser Cys Gly Cys Asp Asp Lys Arg Lys Ala Asp Glu Glu Arg Leu Arg
 100 105 110

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Ile Lys Leu Glu Pro Lys Gly Pro Gly Gly Pro Gln Gly Ser Trp Lys
 115 120 125
 Trp Gly Gly Cys Ser Asp Asn Val Glu Phe Gly Ile Arg Phe Ser Arg
 130 135 140
 Glu Phe Val Asp Ala Arg Glu Arg Glu Lys Leu Met Thr Lys Ser Arg
 145 150 155 160
 Asp Arg Asp Ala Arg Ser Leu Met Asn Leu His Asn Asn Glu Ala Gly
 165 170 175
 Arg Lys Ala Val Lys Ser His Met Arg Arg Glu Cys Lys Cys His Gly
 180 185 190
 Val Ser Gly Ser Cys Ser Leu Lys Thr Cys Trp Leu Ser Leu Pro Asp
 195 200 205
 Phe Arg Glu Val Gly Asp Leu Leu Lys Glu Lys Tyr Asp Gly Ala Ile
 210 215 220
 Glu Val Glu Val Asn Lys Arg Gly Lys Gly Gln Arg Ser Leu Ser Ser
 225 230 235 240
 Arg Lys Gln Ala Ser Ala Leu Glu Ala Ala Asn Glu Arg Phe Lys Lys
 245 250 255
 Pro Thr Arg Asn Gln Tyr Thr Asp Leu Val Tyr Leu Glu Lys Ser Pro
 260 265 270
 Asp Tyr Cys Glu Arg Asp Arg Glu Thr Gly Ser Leu Gly Thr Gln Gly
 275 280 285
 Arg Val Cys Asn Lys Thr Ser Lys Gly Leu Gln Trp Arg Asp Gly Cys
 290 295 300
 Glu Leu Leu Cys Cys Gly Arg Gly Tyr Asn Thr Glu Gln Lys Val Glu
 305 310 315 320
 Arg Thr Glu Lys Cys Asn Cys Lys Phe His Asn Gly Trp Cys Cys Tyr
 325 330 335
 Val Lys Cys Glu Glu Cys Thr Glu Val Val Glu Val His Thr Cys Lys
 340 345 350

<210> 72
 <211> 1216
 <212> PRT
 <213> Rattus norvegicus

<400> 72
 Met Cys Leu Pro Ser Cys Leu Leu Ser Ile Trp Val Leu Phe Met Ala
 1 5 10 15
 Ala Gln Ser Leu Gly Lys Thr Trp Val Pro Asp His Cys Arg Ser Pro
 20 25 30
 Thr Glu Ala Thr Cys Asn Phe Val Cys Asp Cys Gly Asp Cys Ser Asp
 Page 152

35 40 45
 Glu Ala Gln Cys Gly Phe His Gly Ala Ser Thr Thr Pro Asn Thr Pro
 50 55 60
 Phe Thr Cys Asn Phe Glu Gln Asp Pro Cys Gly Trp Gln Asp Ile Ser
 65 70 75 80
 Thr Ser Gly Tyr Arg Trp Leu Arg Asp Arg Ala Gly Ala Gly Leu Asp
 85 90 95
 Ser Ser Gly Pro His Ser Asp His Thr Arg Gly Thr Asp Leu Gly Trp
 100 105 110
 Tyr Met Ala Val Gly Thr His Ser Gly Lys Glu Pro Ser Thr Arg Thr
 115 120 125
 Leu Arg Ser Pro Val Met Arg Glu Ala Ala Pro Thr Cys Glu Leu Arg
 130 135 140
 Leu Trp Tyr His Thr Asp Ser Arg Asp Val Ala Glu Leu Arg Leu Asp
 145 150 155 160
 Leu Thr His Gly Met Glu Thr Leu Thr Leu Trp Gln Ser Ser Gly Pro
 165 170 175
 Trp Gly Pro Trp Pro Gly Arg Glu Leu Ala Val Asn Thr Gly Arg Ile
 180 185 190
 Gln Gly Asp Phe Lys Val Thr Phe Ser Ala Thr Arg Asn Ala Thr His
 195 200 205
 Arg Gly Ala Val Ala Leu Asp Asp Met Glu Phe Trp Asp Cys Gly Leu
 210 215 220
 Pro Ile Pro Gln Ala Arg Cys Pro Leu Gly His His His Cys Gln Asn
 225 230 235 240
 Lys Ala Cys Val Glu Pro His Gln Leu Cys Asp Gly Glu Asp Asn Cys
 245 250 255
 Gly Asp Ser Ser Asp Glu Asp Pro Leu Ile Cys Ser His His Met Ala
 260 265 270
 Thr Asp Phe Glu Thr Gly Leu Gly Pro Trp Thr Gln Leu Glu Gly Trp
 275 280 285
 Thr Arg Asn Phe Ser Ala Gly Ser Met Val Ser Pro Ala Trp Pro His
 290 295 300
 Arg Asp His Ser Arg Asn Ser Ala Tyr Gly Phe Phe Leu Val Ser Val
 305 310 315 320
 Ala Lys Pro Gly Thr Thr Ala Val Leu Tyr Ser Pro Glu Phe Gln Gly
 325 330 335
 Ser Val Ser Tyr Asn Cys Ser Phe Thr Phe Tyr Tyr Tyr Leu His Gly
 340 345 350
 Ser Glu Ala Asn Gln Phe Gln Leu Phe Val Gln Ala Gln Gly Leu Asn
 355 360 365
 Thr Thr Gln Pro Pro Val Leu Leu Arg Ser Arg His Gly Glu Leu Gly
 Page 153

370 375
Thr Ala Trp Val Arg Asp Arg Val Asn Ile Gln Ser Ala His Pro Phe
385 390 395 400
Arg Ile Leu Leu Ala Gly Glu Thr Gly Pro Gly Gly Phe Val Gly Leu
405 410 415
Asp Asp Leu Ile Met Ser Asn His Cys Ile Leu Val Pro Gly Met Ser
420 425 430
Thr Leu Gln Ser Ser Leu Ser Gly Pro Val Pro Leu Ala Leu Tyr Pro
435 440 445
Gln Thr Ser Ile Lys Arg Thr Cys Asp Ala Gly His Leu Ser Cys Asp
450 455 460
Glu Leu Cys Val Pro Pro Glu Gln Leu Cys Asp Phe Gln Gln His Cys
465 470 475 480
Ala Glu Gly Glu Asp Glu Glu Lys Cys Gly Thr Thr Asp Phe Glu Ser
485 490 495
Ala Ser Ala Gly Gly Trp Glu Asp Ile Ser Ile Gly Lys Leu Gln Trp
500 505 510
Gln Arg Ala Glu Ala Gln Glu Ser Gly Lys Pro Ala Arg Asp Thr Asn
515 520 525
Arg Asn Ala Pro Gly His Phe Leu Ser Leu Arg Lys Ala Trp Gly Gln
530 535 540
Leu Arg Ser Glu Ala Arg Ala Leu Thr Pro Thr Leu Gly Pro Ser Gly
545 550 555 560
Pro His Cys Glu Leu His Met Thr Tyr Tyr Phe His Ser His Pro Gln
565 570 575
Gly Phe Leu Ala Leu Ala Val Val Glu Asn Gly Phe Arg Glu Leu Leu
580 585 590
Trp Gln Ala Pro Ser Ser Ser Ser Gly Gly Trp Thr Leu Gln Lys Ile
595 600 605
Leu Leu Gly Ala Arg Arg Trp Pro Phe Gln Leu Glu Phe Val Ser Leu
610 615 620
Val Asp Leu Asp Gly Pro Gly Gln Gln Gly Ala Gly Val Asp Asn Val
625 630 635 640
Thr Leu Arg Asp Cys Asn Pro Met Val Thr Thr Glu Ser Asp Gln Glu
645 650 655
Val Ser Cys Asn Phe Glu Arg Asp Ser Cys Ser Trp His Thr Gly His
660 665 670
Leu Thr Asp Ala His Trp His Arg Val Lys Ser His Gly Ser Gln Tyr
675 680 685
Asp His Thr Thr Gly Gln Gly Phe Phe Met Phe Leu Asp Pro Met Asp
690 695 700
Pro Pro Ala Arg Gly Gln Gly Ala Leu Leu Leu Thr Arg Pro Gln Val

705 710 715 720
 Pro Val Val Pro Lys Glu Cys Leu Ser Phe Trp Tyr His Leu His Gly
 725 730 735
 Pro Gln Ile Gly Thr Leu Cys Leu Ala Met Arg Arg Glu Gly Glu Glu
 740 745 750
 Asp Thr Leu Leu Trp Ser Arg Ser Gly Thr His Gly Asn Arg Trp His
 755 760 765
 Gln Ala Trp Val Thr Leu His His Gln Leu Gln Pro Ser Thr Lys Tyr
 770 775 780
 Gln Leu Leu Phe Glu Gly Leu Arg Asp Gly Tyr His Gly Thr Met Gly
 785 790 795 800
 Leu Asp Asp Met Ala Val Arg Pro Gly Pro Cys Trp Ala Ala Lys Arg
 805 810 815
 Cys Ser Phe Glu Asp Ser Asp Cys Gly Phe Ser Pro Gly Asp Trp Gly
 820 825 830
 Leu Trp Thr Arg Gln Asn Asn Ala Ser Gly Leu Gly Pro Trp Gly Pro
 835 840 845
 Trp Ile Asp His Thr Thr Gly Thr Ala Gln Gly His Tyr Met Val Val
 850 855 860
 Asp Thr Ser Pro Asn Leu Leu Pro Lys Gly His Val Ala Ser Leu Thr
 865 870 875 880
 Ser Glu Glu His Pro Pro Leu Ser Arg Pro Ala Cys Leu Ser Phe Trp
 885 890 895
 Tyr His Leu Ser Phe His Asn Pro Gly Thr Leu Arg Val Phe Val Glu
 900 905 910
 Glu Ser Thr Arg Arg Gln Glu Leu Ser Ile Ser Gly His Gly Gly Phe
 915 920 925
 Ala Trp Arg Leu Gly Ser Val Asn Val Gln Ala Glu Gln Ala Trp Lys
 930 935 940
 Val Val Phe Glu Ala Met Ala Ser Gly Val Glu His Ser Tyr Met Ala
 945 950 955 960
 Leu Asp Asp Ile Ser Leu Gln Asp Gly Pro Cys Ala Gln Pro Gly Ser
 965 970 975
 Cys Asp Phe Glu Ser Gly Leu Cys Gly Trp Ser His Leu Pro Trp Pro
 980 985 990
 Gly Leu Gly Gly Tyr Ser Trp Asp Trp Ser Ser Gly Ala Thr Pro Ser
 995 1000 1005
 Arg Tyr Pro Arg Pro Ser Val Asp His Thr Val Gly Thr Glu Ala Gly
 1010 1015 1020
 His Phe Ala Phe Phe Glu Thr Ser Val Leu Gly Pro Gly Gly Gln Ala
 1025 1030 1035 1040
 Ala Trp Leu Gly Ser Glu Pro Leu Pro Ala Thr Ala Val Ser Cys Leu

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Asp Tyr Leu Leu Trp Ser Ala Glu Glu His Ser Asp Ser Trp Leu Ile
 115 120 125
 Ser Ser Ile Asp Leu Lys Asn Thr Thr Lys Arg Phe Lys Ile Ile Leu
 130 135 140
 Glu Gly Val Leu Gly Glu Asn Thr Met Ser Ser Ile Ala Ile Phe Glu
 145 150 155 160
 Val Lys Met Thr Thr Gly Tyr Cys Ile Glu Cys Asp Phe Glu Glu Asn
 165 170 175
 His Leu Cys Gly Tyr Met Asn Ser Trp Asn Pro Asn Val Asn Trp Phe
 180 185 190
 Val Gly Gly Gly Asn Val Lys Asn Ser His Ser Ile Leu Pro Arg Asp
 195 200 205
 His Thr Leu Asn Asn Glu Leu Gly His Tyr Met Tyr Val Asp Ser Val
 210 215 220
 Tyr Val Lys His Phe Gln Glu Val Ala Gln Leu Val Ser Pro Leu Ile
 225 230 235 240
 Ile Thr Pro Ile Ser Gly Cys Leu Ser Phe Tyr Tyr Gln Leu Gln Arg
 245 250 255
 Glu Thr Ser Asn Ile Phe Leu Val His Thr Arg Asp Leu His Gly Ser
 260 265 270
 Tyr Asp Glu Ile Trp Lys Met Gly Ala Val Arg Gln Gly Glu Trp Asn
 275 280 285
 Leu Ala Glu Val Asp Leu Asn Ala His Val Pro Leu Glu Val Ile Phe
 290 295 300
 Glu Val Ala Phe Asn Gly Ile Gln Ala Gly Tyr Val Ala Leu Asp Asp
 305 310 315 320
 Ile Leu Phe Ser Pro Val Ser Cys Ser Gly Gln Glu Gly Met Phe Phe
 325 330 335
 Asp Ala Arg Glu Ala Gly Cys Asp Phe Glu Glu Gly Met Cys Gln Phe
 340 345 350
 His Gln Asp Asp Asn Asn Gly Ser Gly Trp Ser Arg Val Lys Val Lys
 355 360 365
 Pro Asn Ala Tyr Gln Met Gly Asp His Thr Thr Gly Leu Gly Tyr Phe
 370 375 380
 Met Ile Ala Asn Thr Arg Phe Thr Gly Gln Pro Ala Tyr Phe Gly Arg
 385 390 395 400
 Leu Tyr Gly Pro Ser Leu Pro Gly Asn Ile Gln Tyr Cys Ile Arg Phe
 405 410 415
 Phe Tyr Ser Leu Tyr Gly Phe Tyr Lys Thr Ile Asp Ser Leu Ala Val
 420 425 430
 Tyr Ile Phe Glu Glu Asn His Val Val Gln Glu Lys Ile Trp Ser Ala
 435 440 445

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His Glu Thr Pro Lys Gly Val Trp Leu Gln Ala Glu Ile Ser Ile His
 450 455 460
 Lys Pro Met Pro Phe Lys Val Val Phe Val Ser Trp Cys Lys Ser Leu
 465 470 475 480
 Trp Asp Cys Gly Ile Ala Ala Leu Asp Asp Ile Ser Val Ser Ile Gly
 485 490 495
 Ser Cys Lys Ile Ser Asp Arg Ile Pro Pro Leu Pro Gly Lys Cys Thr
 500 505 510
 Phe Glu Lys Asn Asp Cys Gly Phe Gly Ala Gly Met Ala Lys Glu Gly
 515 520 525
 Tyr Leu Ala Gln Asn Thr Arg Glu Asp Pro Thr Phe Tyr Thr Gly Pro
 530 535 540
 Asn Gly Asp His Thr Ser Gly Val Gly Tyr Tyr Met Tyr Ile Glu Ala
 545 550 555 560
 Thr Asn Met Val Phe Gly Gln Lys Ala Lys Leu Ile Ser Arg Pro Leu
 565 570 575
 Arg Ala Val Ala Gly Lys Gln Cys Leu Thr Phe Tyr Tyr His Met Tyr
 580 585 590
 Gly Ala Gly Thr Gly Leu Leu Asn Val Tyr Leu Thr Lys Glu Gly Asp
 595 600 605
 Ile Asn Lys Asp Thr Leu Leu Trp Thr Arg Lys Gly Glu Gln Ser Ile
 610 615 620
 Thr Trp Leu Lys Ala Gln Met Glu Tyr Glu Ser Glu Gln Gln His Lys
 625 630 635 640
 Ile Val Phe Glu Ala Val Arg Gly Ile Ser Ile Arg Ser Asp Ile Ala
 645 650 655
 Ile Asp Asp Ile Leu Phe Gln Asn Gly Pro Cys Asn Asp Ser Ser Asp
 660 665 670
 Pro Leu Gln Ser Ser Gly Tyr Ser Asp Asn Phe Asn Asn Ile Glu Phe
 675 680 685

<210> 74
 <211> 5376
 <212> PRT
 <213> Mus musculus

<400> 74
 Met Ala Leu Pro Val Trp Thr Leu Met Leu Leu Val Gly Ala Ala Trp
 1 5 10 15
 Gly Gln Glu Gln Val Pro Ala Trp Arg Pro Asn Ser Pro Asp Leu Gly
 20 25 30
 Pro Met Val His Thr Ser Arg Glu Asp Ser Ile Leu Ser Lys Cys Asp
 35 40 45

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Phe Glu Asp Asn Ser Arg Pro Phe Cys Asp Trp Ser Gln Met Ser Ala
 50 55 60
 Asp Asp Gly Asp Trp Ile Arg Thr Thr Gly Pro Ser Leu Thr Gly Thr
 65 70 75 80
 Ser Gly Pro Pro Gly Gly Tyr Pro Asn Gly Glu Gly Tyr Tyr Leu His
 85 90 95
 Met Asp Pro Lys Thr Phe Pro Gln Gly Gly Val Ala Arg Leu Arg Ser
 100 105 110
 Pro Asp Ile Trp Glu Gln Gly Pro Leu Cys Val His Phe Ala Phe His
 115 120 125
 Met Phe Gly Leu Ser Trp Gly Ala Gln Leu Arg Leu Leu Leu Arg
 130 135 140
 Gly Arg Lys His Leu Arg Pro Tyr Val Leu Trp Lys His Val Asn Thr
 145 150 155 160
 Gln Ser Pro Ser Trp Met Pro Thr Thr Val Thr Val Pro Ala Asp His
 165 170 175
 Asp Ile Pro Ser Trp Leu Met Phe Glu Gly Met Arg Gly Asn Thr Ala
 180 185 190
 Tyr Leu Asp Ile Ser Leu Asp Gly Leu Ser Ile Gln Arg Gly Thr Cys
 195 200 205
 Asn Gln Val Cys Met Ser Gln Met Cys Thr Phe Asp Thr Leu Asn Asp
 210 215 220
 Leu Cys Gly Trp Ser Trp Val Pro Thr Ala Thr Gly Ala Lys Trp Thr
 225 230 235 240
 Gln Lys Lys Gly Pro Thr Gly Lys Gln Gly Val Gly Pro Ala Glu Asp
 245 250 255
 Phe Ser Asn Pro Gly Asn Gly Tyr Tyr Met Leu Leu Asp Ser Thr Asn
 260 265 270
 Ala Arg Pro Gly Gln Lys Ala Val Leu Leu Ser Pro Leu Ser His Ser
 275 280 285
 Arg Gly Cys Met Thr Leu Ser Phe His Tyr Ile Met His Gly Gln Gly
 290 295 300
 His Glu Glu Gly Leu Phe Val Tyr Ala Thr Phe Leu Gly Asn Ile Arg
 305 310 315 320
 Lys Tyr Thr Leu Phe Ser Gly His Pro Gly Pro Asp Trp Gln Ala Val
 325 330 335
 Ser Val Asn Tyr Thr Gly Gln Gly Gln Ile Gln Phe Met Val Val Gly
 340 345 350
 Met Phe Gly Asn Ile Pro Glu Pro Ala Ile Ala Val Asp Ala Ile Ser
 355 360 365
 Ile Ala Pro Cys Gly Glu Ser Phe Pro Gln Cys Asp Phe Glu Asp Arg
 370 375 380

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Val His Pro Phe Cys Asp Trp Asn Gln Val Tyr Gly Asp Met Gly His
 385 390 395 400
 Trp Ser Trp Gly Ser Lys Ser Val Pro Thr Leu Ile Ala Gly Ser Pro
 405 410 415
 Arg Glu Phe Pro Tyr Gly Gly Glu His Tyr Ile Phe Phe Asp Ser Val
 420 425 430
 Lys Leu Ser Gln Glu Gly Gln Ser Ala Arg Leu Val Ser Pro Pro Phe
 435 440 445
 Cys Ala Pro Gly Gly Ile Cys Val Glu Phe Ala Tyr His Met Tyr Gly
 450 455 460
 Leu Gly Lys Gly Thr Thr Leu Lys Leu Leu Leu Gly Ser Pro Ala Gly
 465 470 475 480
 Ser Ser Pro Ile Pro Leu Trp Asn Arg Val Gly Ser Gln Ser Ser Gly
 485 490 495
 Trp Met Asn Ser Ser Val Thr Ile Pro Lys Gly Tyr Gln Gln Pro Met
 500 505 510
 Gln Leu Phe Ile Glu Ala Thr Arg Gly Thr Ser Thr Ala Phe Val Val
 515 520 525
 Ala Leu Asn Phe Ile Leu Ile Ser His Gly Pro Cys Arg Val Leu Leu
 530 535 540
 Gln Thr Glu Ile Pro Ser Ser Pro Leu Leu Pro Pro Thr Gly Pro Ser
 545 550 555 560
 Glu Ser Thr Val Pro Thr Leu Pro Met Glu Gln Pro Thr Ser Pro Thr
 565 570 575
 Lys Ala Thr Thr Val Thr Ile Glu Ile Pro Thr Thr Pro Thr Glu Glu
 580 585 590
 Ala Thr Ile Pro Thr Glu Thr Thr Thr Val Pro Thr Glu Val Ile Asn
 595 600 605
 Val Ser Pro Lys Glu Thr Ser Ile Pro Pro Glu Val Thr Ile Pro Thr
 610 615 620
 Glu Val Ile Thr Val Ser Pro Glu Glu Ile Ile Ser Pro Thr Glu Val
 625 630 635 640
 Thr Pro Val Pro Thr Asp Val Thr Ala Ala Tyr Val Glu Ala Thr Asn
 645 650 655
 Ala Ser Pro Glu Glu Thr Ser Val Pro Pro Glu Val Thr Ile Leu Thr
 660 665 670
 Glu Val Thr Thr Val Ser Pro Glu Glu Thr Thr Val Pro Thr Glu Val
 675 680 685
 Pro Ile Val Leu Ile Glu Ala Thr Ala Phe Pro Thr Gly Glu Thr Thr
 690 695 700
 Leu Tyr Thr Glu Val Pro Thr Val Pro Thr Glu Val Thr Gly Val His
 705 710 715 720

Thr Glu Val Thr Asn Val Ser Pro Glu Glu Thr Ser Val Pro Thr Glu
 725 730 735
 Glu Thr Ile Ser Thr Glu Val Thr Thr Val Ser Pro Glu Glu Thr Thr
 740 745 750
 Val Pro Thr Glu Val Pro Ile Val Leu Ile Glu Ala Thr Ala Ser Pro
 755 760 765
 Thr Gly Glu Ile Thr Leu Tyr Thr Glu Val Pro Thr Val Pro Thr Glu
 770 775 780
 Val Thr Gly Val His Thr Glu Val Thr Asn Val Ser Pro Glu Glu Thr
 785 790 795 800
 Ser Val Pro Thr Glu Glu Thr Ile Ser Thr Glu Val Thr Thr Val Ser
 805 810 815
 Pro Glu Glu Thr Thr Leu Pro Thr Glu Val Pro Thr Val Ser Thr Glu
 820 825 830
 Val Thr Asn Val Ser Pro Glu Glu Thr Ser Val Pro Pro Glu Glu Thr
 835 840 845
 Ile Leu Thr Thr Leu Tyr Thr Glu Val Pro Thr Val Pro Thr Glu Val
 850 855 860
 Thr Gly Val His Thr Glu Val Thr Asn Val Ser Pro Glu Glu Thr Ser
 865 870 875 880
 Val Pro Thr Glu Glu Thr Ile Ser Thr Glu Val Thr Thr Val Ser Pro
 885 890 895
 Glu Glu Thr Thr Leu Pro Thr Glu Val Pro Thr Val Ser Thr Glu Val
 900 905 910
 Thr Asn Val Ser Pro Glu Glu Thr Ser Val Pro Pro Glu Glu Thr Ile
 915 920 925
 Leu Thr Glu Ile Thr Thr Val Ser Pro Glu Glu Thr Val Phe Pro Ile
 930 935 940
 Glu Gly Thr Thr Leu Pro Thr Glu Val Leu Thr Val Pro Ile Glu Val
 945 950 955 960
 Thr Thr Phe Pro Thr Gly Glu Thr Thr Val Pro Thr Glu Val Pro Thr
 965 970 975
 Val Ser Thr Glu Met Thr Gly Val His Thr Glu Val Thr Thr Val Phe
 980 985 990
 Pro Glu Glu Thr Ser Ile Pro Thr Glu Val Ala Thr Val Leu Pro Ala
 995 1000 1005
 Ser Ile Pro Pro Glu Glu Thr Thr Thr Pro Thr Glu Val Thr Thr Thr
 1010 1015 1020
 Pro Pro Glu Glu Thr Thr Ile Pro Ala Glu Val Thr Thr Val Pro Pro
 1025 1030 1035 1040
 Ala Ser Ile Pro Pro Glu Glu Thr Ala Ser Leu Thr Glu Val Thr Thr
 1045 1050 1055

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Thr Pro Pro Glu Glu Thr Thr Thr Pro Thr Glu Val Thr Thr Val Pro
 1060 1065 1070
 Pro Glu Lys Thr Thr Ile Pro Thr Glu Val Thr Thr Val Pro Pro Ala
 1075 1080 1085
 Ser Ile Phe Pro Glu Glu Thr Thr Val Pro Pro Glu Glu Thr Thr Ile
 1090 1095 1100
 Ala Ser Glu Glu Thr Thr Val Ser Thr Gln Glu Thr Thr Leu Leu Thr
 1105 1110 1115 1120
 Glu Gln Ser Ala Val Thr Gln Thr Ser Ile Ala Cys Arg Pro Pro Cys
 1125 1130 1135
 Pro Ser Pro Pro Leu Met Pro Ile Gly Pro Leu Leu Ser Lys Pro Pro
 1140 1145 1150
 Gly Val Ser Met Phe Ser Leu Ala Pro Thr Thr Gly Val Ser Thr Thr
 1155 1160 1165
 Glu Ser Cys Pro Pro Asn Ala His Ile Glu Leu Cys Ala Cys Pro Ala
 1170 1175 1180
 Ser Cys Glu Ser Pro Lys Pro Ser Cys Gln Pro Pro Cys Ile Pro Gly
 1185 1190 1195 1200
 Cys Val Cys Asn Pro Gly Phe Leu Phe Ser Asn Asn Gln Cys Ile Asn
 1205 1210 1215
 Glu Ser Ser Cys Asn Cys Pro Tyr Asn Asn Lys His Tyr Lys Pro Gly
 1220 1225 1230
 Glu Glu Trp Phe Thr Pro Asn Cys Thr Glu Arg Cys Arg Cys Leu Pro
 1235 1240 1245
 Gly Ser Leu Met Glu Cys Gln Ile Ser Gln Cys Gly Thr His Thr Val
 1250 1255 1260
 Cys Gln Leu Lys Ser Asp Gln Tyr Gln Cys Glu Pro Tyr Gly Lys Ala
 1265 1270 1275 1280
 Thr Cys Leu Val Tyr Gly Asp Leu His Phe Val Thr Phe Asp Glu Arg
 1285 1290 1295
 His Ile Gly Phe Thr Gly Thr Cys Thr Tyr Ile Leu Thr Gln Thr Cys
 1300 1305 1310
 Ser Asn Ser Thr Asp His Phe Phe Arg Ile Thr Ala Asn Thr Glu Glu
 1315 1320 1325
 Arg Gly Val Glu Gly Val Ser Cys Leu Asp Lys Val Val Ile Ser Leu
 1330 1335 1340
 Pro Glu Thr Thr Val Thr Met Ile Ser Gly Arg His Thr Leu Ile Gly
 1345 1350 1355 1360
 Asp Gln Glu Val Thr Leu Pro Ala Ile Leu Ser Asp Asp Thr Tyr Val
 1365 1370 1375
 Gly Leu Ser Gly Arg Phe Val Glu Leu Arg Thr Thr Phe Gly Leu Arg
 1380 1385 1390

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Val Arg Trp Asp Gly Asp Gln Gln Leu Phe Val Thr Val Ser Ser Thr
 1395 1400 1405
 Phe Ser Gly Lys Leu Cys Gly Phe Cys Gly Asn Tyr Asp Gly Asp Ser
 1410 1415 1420
 Ser Asn Asp Asn Leu Lys Ser Asp Gly Met Met Thr His Asp Glu Glu
 1425 1430 1435 1440
 Glu Leu Arg Leu Ser Trp Gln Val Glu Glu Asp Glu Asp Lys Asp Trp
 1445 1450 1455
 Val Ser Ser Arg Cys Gln Lys Lys Lys Asn Pro Pro Ser Cys Asp Ala
 1460 1465 1470
 Ala Leu Gly Ser Thr Met Ser Gly Pro Lys Leu Cys Gly Gln Leu Val
 1475 1480 1485
 Asn Pro Ser Gly Pro Phe Glu Ala Cys Leu Leu His Leu Lys Ala Ser
 1490 1495 1500
 Ser Phe Leu Asp Asn Cys Val Thr Asp Met Cys Ser Phe Gln Gly Leu
 1505 1510 1515 1520
 Gln Gln Lys Leu Cys Ala Arg Met Ser Ala Met Thr Ala Thr Cys Gln
 1525 1530 1535
 Asp Ala Gly Tyr Pro Val Lys Pro Trp Arg Glu Pro Gln Phe Cys Pro
 1540 1545 1550
 Leu Val Cys Pro Lys Asn Ser Arg Tyr Ser Leu Cys Ala Lys Pro Cys
 1555 1560 1565
 Pro Glu Thr Cys His Pro Ile Ser Thr Thr Gln His Cys Ser Asp Lys
 1570 1575 1580
 Cys Val Glu Gly Cys Glu Cys Asp Pro Gly Phe Ile Leu Ser Gly Ser
 1585 1590 1595 1600
 Glu Cys Val Pro Ser Ser Gln Cys Gly Cys Thr Ser Phe Gln Gly Arg
 1605 1610 1615
 Tyr Phe Lys Leu Gln Glu Gln Trp Phe Asn Pro Asp Cys Lys Glu Ile
 1620 1625 1630
 Cys Thr Cys Glu Ser His Asn His Ile Leu Cys Lys Pro Trp Lys Cys
 1635 1640 1645
 Lys Ala Gln Glu Ala Cys Ser Tyr Lys Asn Gly Val Leu Gly Cys His
 1650 1655 1660
 Ala Gln Gly Ala Ala Thr Cys Met Val Ser Gly Asp Pro His Tyr Leu
 1665 1670 1675 1680
 Thr Phe Asp Gly Ala Leu His His Phe Met Gly Thr Cys Thr Tyr Val
 1685 1690 1695
 Leu Thr Gln Pro Cys Trp Ser Lys Ser Gln Glu Asn Asn Phe Val Val
 1700 1705 1710
 Ser Ala Thr Asn Glu Ile His Asp Gly Asn Leu Glu Val Ser Tyr Val
 1715 1720 1725

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Lys Ala Val His Val Gln Val Phe Asp Leu Lys Ile Ser Met Phe Lys
 1730 1735 1740
 Gly Gln Lys Val Val Leu Asn Asn Gln Arg Val Val Leu Pro Val Trp
 1745 1750 1755 1760
 Pro Ser Gln Gly Arg Val Thr Ile Arg Leu Ser Gly Ile Phe Val Leu
 1765 1770 1775
 Leu Tyr Thr Asn Phe Gly Leu Gln Val Arg Tyr Asp Gly Arg His Leu
 1780 1785 1790
 Val Glu Val Thr Val Pro Ser Ser Tyr Thr Gly Ser Leu Cys Gly Leu
 1795 1800 1805
 Cys Gly Asn Tyr Asn Asn Asn Ser Met Asp Asp Asn Leu Arg Ala Asp
 1810 1815 1820
 Met Lys Pro Ala Gly Asn Ser Leu Leu Leu Gly Ala Ala Trp Lys Ile
 1825 1830 1835 1840
 Leu Glu Ala Ser Asp Pro Gly Cys Phe Leu Ala Gly Gly Lys Pro Ser
 1845 1850 1855
 Arg Cys Ala Asp Ser Asp Met Asp Asp Val Trp Thr Lys Lys Cys Ala
 1860 1865 1870
 Ile Leu Met Asn Pro Leu Gly Pro Phe Ser Asn Cys His Glu Ala Val
 1875 1880 1885
 Pro Pro Gln Ala Ser Phe Ser Ser Cys Val Tyr Gly Gln Cys Glu Thr
 1890 1895 1900
 Asn Gly Asp Asn Leu Thr Phe Cys His Ser Leu Gln Ala Tyr Ala Ser
 1905 1910 1915 1920
 Leu Cys Ala Gln Ala Gly Gln Val Thr Thr Trp Arg Asn Ser Thr Phe
 1925 1930 1935
 Cys Pro Met Arg Cys Pro Pro Arg Ser Ser Tyr Asn Pro Cys Ala Asn
 1940 1945 1950
 Ser Cys Pro Ala Thr Cys Leu Thr Leu Ser Thr Pro Arg Asp Cys Pro
 1955 1960 1965
 Thr Leu Pro Cys Val Glu Gly Cys Glu Cys Gln Ser Gly His Ile Leu
 1970 1975 1980
 Ser Gly Thr Thr Cys Val Pro Leu Arg Gln Cys Gly Cys Ser Asp Gln
 1985 1990 1995 2000
 Asp Gly Ser Tyr His Leu Leu Gly Glu Ser Trp Tyr Thr Glu Lys Thr
 2005 2010 2015
 Cys Thr Thr Leu Cys Thr Cys Ser Ala His Ser Asn Ile Thr Cys Ser
 2020 2025 2030
 Pro Thr Ala Cys Lys Ala Asn His Val Cys Leu Arg Gln Glu Gly Leu
 2035 2040 2045
 Leu Arg Cys Ala Ala Glu Met Gly Glu Cys Arg Ile Ser Glu Asp Ser
 2050 2055 2060

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Gln Ile Val Ser Phe Asp Asp His Ser His Pro Ile Gln Asp Thr Cys
 2065 2070 2075 2080
 Thr Tyr Ile Leu Val Lys Val Cys His Pro Asn Thr Asn Met Pro Phe
 2085 2090 2095
 Phe Met Ile Ser Ala Lys Thr Asp Ile Asn Thr Asn Gly Lys Asn Lys
 2100 2105 2110
 Thr Phe Gly Val Tyr Gln Leu Tyr Ile Asp Ile Phe Asn Phe His Ile
 2115 2120 2125
 Thr Leu Gln Lys Asp His Leu Val Leu Ile Ser Leu Ile Asn Asp Ser
 2130 2135 2140
 Ile Val Thr Leu Pro Thr Thr Thr His Ile Pro Gly Val Ser Val Met
 2145 2150 2155 2160
 Thr Glu Asp Val Tyr Thr Ile Val Thr Ile Lys Asp Glu Ile Gln Val
 2165 2170 2175
 Lys Phe Glu Ser Asn Asn Phe Leu Asp Val Lys Ile Pro Ala Ser Ser
 2180 2185 2190
 Asn Gly Lys Val Cys Gly Val Cys Gly Asn Phe Asn Gly Glu Glu Glu
 2195 2200 2205
 Asp Glu Leu Met Thr Pro Ser Gly Glu Leu Ala Glu Asp Glu Gln Glu
 2210 2215 2220
 Phe Met Asn Ser Trp Lys Asp Lys Ser Met Asp Pro Asn Cys Gln Lys
 2225 2230 2235 2240
 Ile Glu Gly Gln Asn Leu Gln Val Glu Gln Gln Glu Ile Met Asn Gly
 2245 2250 2255
 Lys Cys Arg Pro Ile Asp Phe Glu Lys Ala Gln Ala Asn Cys Gln Thr
 2260 2265 2270
 Ala Leu Gln Gly Pro Ala Trp Ala His Cys Ser Ser Arg Val Pro Ile
 2275 2280 2285
 Lys Pro Phe Leu Leu Lys Cys Met Asn Ser Phe Cys Glu Phe Arg Glu
 2290 2295 2300
 Leu Phe Arg Ala Leu Cys Asp Ser Leu Gln Ser Phe Glu Asp Ala Cys
 2305 2310 2315 2320
 Gln Asn Gln Gly Leu Lys Pro Pro Ile Trp Arg Asn Ser Ser Phe Cys
 2325 2330 2335
 Pro Leu Glu Cys Pro Ala His Ser His Tyr Thr Asn Cys Leu Pro Ser
 2340 2345 2350
 Cys Pro Pro Ser Cys Leu Asp Pro Asp Ser Arg Cys Glu Gly Ser Gly
 2355 2360 2365
 His Lys Val Pro Ala Thr Cys Arg Glu Gly Cys Ile Cys Gln Pro Asp
 2370 2375 2380
 Tyr Val Leu Leu Asn Asp Lys Cys Val Leu Arg Ser His Cys Gly Cys
 2385 2390 2395 2400

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Lys Asp Ala Gln Gly Val Phe Ile Pro Ala Gly Lys Thr Trp Ile Ser
 2405 2410 2415
 Glu Asp Cys Thr Gln Ser Cys Thr Cys Met Lys Gly Ser Met Arg Cys
 2420 2425 2430
 Trp Asp Phe Gln Cys Pro Pro Gly Thr Tyr Cys Lys Asn Ser Asn Asp
 2435 2440 2445
 Gly Ser Ser Asn Cys Val Lys Ile Ser Leu Gln Cys Pro Ala His Ser
 2450 2455 2460
 Lys Phe Thr Asp Cys Leu Pro Pro Cys His Pro Ser Cys Ser Asp Pro
 2465 2470 2475 2480
 Asp Gly His Cys Glu Gly Ile Ser Thr Asn Ala His Ser Asn Cys Lys
 2485 2490 2495
 Glu Gly Cys Val Cys Gln Pro Gly Tyr Val Leu Arg Asn Asp Lys Cys
 2500 2505 2510
 Val Leu Arg Ile Glu Cys Gly Cys Gln His Thr Gln Gly Gly Phe Ile
 2515 2520 2525
 Pro Ala Gly Lys Asn Trp Thr Ser Arg Gly Cys Ser Gln Ser Cys Asp
 2530 2535 2540
 Cys Met Glu Gly Val Ile Arg Cys Gln Asn Phe Gln Cys Pro Ser Gly
 2545 2550 2555 2560
 Thr Tyr Cys Gln Asp Ile Glu Asp Gly Thr Ser Asn Cys Ala Asn Ile
 2565 2570 2575
 Thr Leu Gln Cys Pro Ala His Ser Ser Phe Thr Asn Cys Leu Pro Pro
 2580 2585 2590
 Cys Gln Pro Ser Cys Ser Asp Pro Glu Gly His Cys Gly Gly Ser Thr
 2595 2600 2605
 Thr Lys Ala Pro Ser Ala Cys Gln Glu Gly Cys Val Cys Glu Pro Asp
 2610 2615 2620
 Tyr Val Val Leu Asn Asn Lys Cys Val Pro Arg Ile Glu Cys Gly Cys
 2625 2630 2635 2640
 Lys Asp Ala Gln Gly Val Leu Ile Pro Ala Asp Lys Ile Trp Ile Asn
 2645 2650 2655
 Lys Gly Cys Thr Gln Thr Cys Ala Cys Val Thr Gly Thr Ile His Cys
 2660 2665 2670
 Arg Asp Phe Gln Cys Pro Ser Gly Thr Tyr Cys Lys Asp Ile Lys Asp
 2675 2680 2685
 Asp Ala Ser Asn Cys Thr Glu Ile Ile Leu Gln Cys Pro Asp His Ser
 2690 2695 2700
 Leu Tyr Thr His Cys Leu Pro Ser Cys Leu Leu Ser Cys Ser Asp Pro
 2705 2710 2715 2720
 Asp Gly Leu Cys Arg Gly Thr Ser Pro Glu Ala Pro Ser Thr Cys Lys
 2725 2730 2735

Glu Gly Cys Val Cys Asp Pro Asp Tyr Val Leu Ser Asn Asp Lys Cys
 2740 2745 2750
 Val Leu Arg Ile Glu Cys Gly Cys Lys Asp Ala Gln Gly Val Leu Ile
 2755 2760 2765
 Pro Ala Gly Lys Thr Trp Ile Asn Arg Gly Cys Thr Gln Ser Cys Ser
 2770 2775 2780
 Cys Met Gly Gly Ala Ile Gln Cys Gln Asn Phe Lys Cys Pro Ser Glu
 2785 2790 2795 2800
 Ala Tyr Cys Gln Asp Met Glu Asp Gly Asn Ser Asn Cys Thr Ser Ile
 2805 2810 2815
 Pro Leu Gln Cys Pro Ala His Ser His Tyr Thr Asn Cys Leu Pro Thr
 2820 2825 2830
 Cys Gln Pro Ser Cys Ser Asp Pro Asp Gly His Cys Glu Gly Ser Ser
 2835 2840 2845
 Thr Lys Ala Pro Ser Ala Cys Lys Glu Gly Cys Val Cys Glu Pro Asp
 2850 2855 2860
 Tyr Val Met Leu Asn Asn Lys Cys Val Pro Arg Ile Glu Cys Gly Cys
 2865 2870 2875 2880
 Lys Asp Thr Gln Gly Val Leu Ile Pro Ala Asp Lys Thr Trp Ile Asn
 2885 2890 2895
 Arg Gly Cys Thr Gln Ser Cys Thr Cys Arg Gly Gly Ala Ile Gln Cys
 2900 2905 2910
 Gln Lys Tyr His Cys Ser Ser Gly Thr Tyr Cys Lys Asp Met Glu Asp
 2915 2920 2925
 Asp Ser Ser Ser Cys Ala Thr Ile Thr Leu Gln Cys Pro Ala His Ser
 2930 2935 2940
 His Phe Thr Asn Cys Leu Pro Pro Cys Gln Pro Ser Cys Leu Asp Ser
 2945 2950 2955 2960
 Glu Gly His Cys Glu Gly Ser Thr Thr Lys Ala Pro Ser Ala Cys Gln
 2965 2970 2975
 Glu Gly Cys Val Cys Glu Pro Asp Tyr Val Val Leu Asn Asn Lys Cys
 2980 2985 2990
 Val Pro Arg Ile Glu Cys Gly Cys Lys Asp Ala Gln Gly Val Leu Ile
 2995 3000 3005
 Pro Ala Asp Lys Thr Trp Ile Asn Arg Gly Cys Thr Gln Ser Cys Thr
 3010 3015 3020
 Cys Lys Gly Gly Ala Ile Gln Cys Gln Lys Phe Gln Cys Pro Ser Glu
 3025 3030 3035 3040
 Thr Tyr Cys Lys Asp Ile Glu Asp Gly Asn Ser Asn Cys Thr Arg Ile
 3045 3050 3055
 Ser Leu Gln Cys Pro Ala Asn Ser Asn Phe Thr Ser Cys Leu Pro Ser
 3060 3065 3070

Cys Gln Pro Ser Cys Ser Asn Thr Asp Val His Cys Glu Gly Ser Ser
 3075 3080 3085
 Pro Asn Thr Leu Ser Ser Cys Arg Glu Gly Cys Val Cys Gln Ser Gly
 3090 3095 3100
 Tyr Val Leu His Asn Asp Lys Cys Ile Leu Arg Asn Gln Cys Gly Cys
 3105 3110 3115 3120
 Lys Asp Ala Gln Gly Ala Leu Ile Pro Glu Gly Lys Thr Trp Ile Thr
 3125 3130 3135
 Ser Gly Cys Thr Gln Ser Cys Asn Cys Thr Gly Gly Ala Ile Gln Cys
 3140 3145 3150
 Gln Asn Phe Gln Cys Pro Leu Lys Thr Tyr Cys Lys Asp Leu Lys Asp
 3155 3160 3165
 Gly Ser Ser Asn Cys Thr Asn Ile Pro Leu Gln Cys Pro Ala His Ser
 3170 3175 3180
 Arg Tyr Thr Asn Cys Leu Pro Ser Cys Pro Pro Leu Cys Leu Asp Pro
 3185 3190 3195 3200
 Glu Gly Leu Cys Glu Gly Thr Ser Pro Lys Val Pro Ser Thr Cys Arg
 3205 3210 3215
 Glu Gly Cys Ile Cys Gln Pro Gly Tyr Leu Met His Lys Asn Lys Cys
 3220 3225 3230
 Val Leu Arg Ile Phe Cys Gly Cys Lys Asn Thr Gln Gly Ala Phe Ile
 3235 3240 3245
 Ser Ala Asp Lys Thr Trp Ile Ser Arg Gly Cys Thr Gln Ser Cys Thr
 3250 3255 3260
 Cys Pro Ala Gly Ala Ile His Cys Arg Asn Phe Lys Cys Pro Ser Gly
 3265 3270 3275 3280
 Thr Tyr Cys Lys Asn Gly Asp Asn Gly Ser Ser Asn Cys Thr Glu Ile
 3285 3290 3295
 Thr Leu Gln Cys Pro Thr Asn Ser Gln Phe Thr Asp Cys Leu Pro Ser
 3300 3305 3310
 Cys Val Pro Ser Cys Ser Asn Arg Cys Glu Val Thr Ser Pro Ser Val
 3315 3320 3325
 Pro Ser Ser Cys Arg Glu Gly Cys Leu Cys Asn His Gly Phe Val Phe
 3330 3335 3340
 Ser Glu Asp Lys Cys Val Pro Arg Thr Gln Cys Gly Cys Lys Asp Ala
 3345 3350 3355 3360
 Arg Gly Ala Ile Ile Pro Ala Gly Lys Thr Trp Thr Ser Lys Gly Cys
 3365 3370 3375
 Thr Gln Ser Cys Ala Cys Val Glu Gly Asn Ile Gln Cys Gln Asn Phe
 3380 3385 3390
 Gln Cys Pro Pro Glu Thr Tyr Cys Lys Asp Asn Ser Glu Gly Ser Ser
 3395 3400 3405

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Thr Cys Thr Lys Ile Thr Leu Gln Cys Pro Ala His Thr Gln Tyr Thr
 3410 3415 3420
 Ser Cys Leu Pro Ser Cys Leu Pro Ser Cys Leu Asp Pro Glu Gly Leu
 3425 3430 3435 3440
 Cys Lys Asp Ile Ser Pro Lys Val Pro Ser Thr Cys Lys Glu Gly Cys
 3445 3450 3455
 Val Cys Gln Ser Gly Tyr Val Leu Asn Ser Asp Lys Cys Val Leu Arg
 3460 3465 3470
 Ala Glu Cys Asp Cys Lys Asp Ala Gln Gly Ala Leu Ile Pro Ala Gly
 3475 3480 3485
 Lys Thr Trp Thr Ser Pro Gly Cys Thr Gln Ser Cys Ala Cys Met Gly
 3490 3495 3500
 Gly Ala Val Gln Cys Gln Ser Ser Gln Cys Pro Pro Gly Thr Tyr Cys
 3505 3510 3515 3520
 Lys Asp Asn Glu Asp Gly Asn Ser Asn Cys Ala Lys Ile Thr Leu Gln
 3525 3530 3535
 Cys Pro Ala His Ser Leu Phe Thr Asn Cys Leu Pro Pro Cys Leu Pro
 3540 3545 3550
 Ser Cys Leu Asp Pro Asp Gly Leu Cys Lys Gly Ala Ser Pro Lys Val
 3555 3560 3565
 Pro Ser Thr Cys Lys Glu Gly Cys Ile Cys Gln Ser Gly Tyr Val Leu
 3570 3575 3580
 Ser Asn Asn Lys Cys Leu Leu Arg Asn Arg Cys Gly Cys Lys Asp Ala
 3585 3590 3595 3600
 His Gly Ala Leu Ile Pro Glu Asp Lys Thr Trp Val Ser Arg Gly Cys
 3605 3610 3615
 Thr Gln Ser Cys Val Cys Thr Gly Gly Ser Ile Gln Cys Leu Ser Ser
 3620 3625 3630
 Gln Cys Pro Pro Gly Ala Tyr Cys Lys Asp Asn Glu Asp Gly Ser Ser
 3635 3640 3645
 Asn Cys Ala Arg Ile Pro Pro Gln Cys Pro Ala Asn Ser His Tyr Thr
 3650 3655 3660
 Asp Cys Phe Pro Pro Cys Pro Pro Ser Cys Ser Asp Pro Glu Gly His
 3665 3670 3675 3680
 Cys Glu Ala Ser Gly Pro Arg Val Leu Ser Thr Cys Arg Glu Gly Cys
 3685 3690 3695
 Leu Cys Asn Pro Gly Phe Val Leu Asp Arg Asp Lys Cys Val Pro Arg
 3700 3705 3710
 Val Glu Cys Gly Cys Lys Asp Ala Gln Gly Ala Leu Ile Pro Ser Gly
 3715 3720 3725
 Lys Thr Trp Thr Ser Pro Gly Cys Thr Gln Ser Cys Ala Cys Met Gly
 3730 3735 3740

Gly Val Val Gln Cys Gln Ser Ser Gln Cys Pro Pro Gly Thr Tyr Cys
 3745 3750 3755 3760
 Lys Asp Asn Glu Asp Gly Asn Ser Asn Cys Ala Lys Ile Thr Leu Gln
 3765 3770 3775
 Cys Pro Thr His Ser Asn Tyr Thr Asp Cys Leu Pro Phe Cys Leu Pro
 3780 3785 3790
 Ser Cys Leu Asp Pro Ser Ala Leu Cys Gly Gly Thr Ser Pro Lys Gly
 3795 3800 3805
 Pro Ser Thr Cys Lys Glu Gly Cys Val Cys Gln Pro Gly Tyr Val Leu
 3810 3815 3820
 Asp Lys Asp Lys Cys Ile Leu Lys Ile Glu Cys Gly Cys Arg Asp Thr
 3825 3830 3835 3840
 Gln Gly Ala Val Ile Pro Ala Gly Lys Thr Trp Leu Ser Thr Gly Cys
 3845 3850 3855
 Ile Gln Ser Cys Ala Cys Val Glu Gly Thr Ile Gln Cys Gln Asn Phe
 3860 3865 3870
 Gln Cys Pro Pro Gly Thr Tyr Cys Asn His Asn Asn Asn Cys Ala Lys
 3875 3880 3885
 Ile Pro Leu Gln Cys Pro Ala His Ser His Phe Thr Ser Cys Leu Pro
 3890 3895 3900
 Ser Cys Pro Pro Ser Cys Ala Asn Leu Asp Gly Ser Cys Glu Gln Thr
 3905 3910 3915 3920
 Ser Pro Lys Val Pro Ser Thr Cys Lys Glu Gly Cys Leu Cys Gln Pro
 3925 3930 3935
 Gly Tyr Phe Leu Asn Asn Gly Lys Cys Val Leu Gln Thr His Cys Asp
 3940 3945 3950
 Cys Lys Asp Ala Glu Gly Gly Leu Val Pro Ala Gly Lys Thr Trp Thr
 3955 3960 3965
 Ser Lys Asp Cys Thr Gln Ser Cys Ala Cys Thr Gly Gly Ala Val Gln
 3970 3975 3980
 Cys Gln Asn Phe Gln Cys Pro Leu Gly Thr Tyr Cys Lys Asp Ser Gly
 3985 3990 3995 4000
 Asp Gly Ser Ser Asn Cys Thr Lys Ile His Lys Gly Ala Met Gly Asp
 4005 4010 4015
 Gly Val Leu Met Ala Gly Gly Ile Arg Ala Leu Gln Cys Pro Ala His
 4020 4025 4030
 Ser His Phe Thr Ser Cys Leu Pro Ser Cys Pro Pro Ser Cys Ser Asn
 4035 4040 4045
 Leu Asp Gly Ser Cys Val Glu Ser Asn Phe Lys Ala Pro Ser Val Cys
 4050 4055 4060
 Lys Lys Gly Cys Ile Cys Gln Pro Gly Tyr Leu Leu Asn Asn Asp Lys
 4065 4070 4075 4080

Cys Val Leu Arg Ile Gln Cys Gly Cys Lys Asp Thr Gln Gly Gly Leu
 4085 4090 4095
 Ile Pro Ala Gly Arg Thr Trp Ile Ser Ser Asp Cys Thr Lys Ser Cys
 4100 4105 4110
 Ser Cys Met Gly Gly Ile Ile Gln Cys Arg Asp Phe Gln Cys Pro Pro
 4115 4120 4125
 Gly Thr Tyr Cys Lys Glu Ser Asn Asp Ser Ser Arg Thr Cys Ala Lys
 4130 4135 4140
 Ile Pro Leu Gln Cys Pro Ala His Ser His Tyr Thr Asn Cys Leu Pro
 4145 4150 4155 4160
 Ala Cys Ser Arg Ser Cys Thr Asp Leu Asp Gly His Cys Glu Gly Thr
 4165 4170 4175
 Ser Pro Lys Val Pro Ser Pro Cys Lys Glu Gly Cys Leu Cys Gln Pro
 4180 4185 4190
 Gly Tyr Val Val His Asn His Lys Cys Val Leu Gln Ile His Cys Gly
 4195 4200 4205
 Cys Lys Asp Ala Gln Gly Gly Phe Val Pro Ala Gly Lys Thr Trp Ile
 4210 4215 4220
 Ser Arg Gly Cys Thr Gln Ser Cys Ala Cys Val Gly Gly Ala Val Gln
 4225 4230 4235 4240
 Cys His Asn Phe Thr Cys Pro Thr Gly Thr Gln Cys Gln Asn Ser Ser
 4245 4250 4255
 Cys Ser Lys Ile Thr Val Gln Cys Pro Ala His Ser Gln Tyr Thr Thr
 4260 4265 4270
 Cys Leu Pro Ser Cys Leu Pro Ser Cys Phe Asp Pro Glu Gly Leu Cys
 4275 4280 4285
 Gly Gly Ala Ser Pro Arg Ala Pro Ser Thr Cys Arg Glu Gly Cys Val
 4290 4295 4300
 Cys Glu Ala Asp Tyr Val Leu Arg Glu Asp Lys Cys Val Leu Arg Thr
 4305 4310 4315 4320
 Gln Cys Gly Cys Lys Asp Ala Gln Gly Asp Leu Ile Pro Ala Asn Lys
 4325 4330 4335
 Thr Trp Leu Thr Arg Gly Cys Ala Gln Lys Cys Thr Cys Lys Gly Gly
 4340 4345 4350
 Asn Ile His Cys Trp Asn Phe Lys Cys Pro Leu Gly Thr Glu Cys Lys
 4355 4360 4365
 Asp Ser Val Asp Gly Gly Ser Asn Cys Thr Lys Ile Ala Leu Gln Cys
 4370 4375 4380
 Pro Ala His Ser His His Thr Tyr Cys Leu Pro Ser Cys Ile Pro Ser
 4385 4390 4395 4400
 Cys Ser Asn Val Asn Asp Arg Cys Glu Ser Thr Ser Leu Gln Arg Pro
 4405 4410 4415

Ser Thr Cys Ile Glu Gly Cys Leu Cys His Ser Gly Phe Val Phe Ser
 4420 4425 4430
 Lys Asp Lys Cys Val Pro Arg Thr Gln Cys Gly Cys Lys Asp Ser Gln
 4435 4440 4445
 Gly Thr Leu Ile Pro Ala Gly Lys Asn Trp Ile Thr Thr Gly Cys Ser
 4450 4455 4460
 Gln Arg Cys Thr Cys Thr Gly Gly Leu Val Gln Cys His Asp Phe Gln
 4465 4470 4475 4480
 Cys Pro Ser Gly Ala Glu Cys Gln Asp Ile Glu Asp Gly Asn Ser Asn
 4485 4490 4495
 Cys Val Glu Ile Thr Val Gln Cys Pro Ala His Ser His Tyr Ser Lys
 4500 4505 4510
 Cys Leu Pro Pro Cys Gln Pro Ser Cys Ser Asp Pro Asp Gly His Cys
 4515 4520 4525
 Glu Gly Thr Ser Pro Glu Ala Pro Ser Thr Cys Glu Glu Gly Cys Val
 4530 4535 4540
 Cys Glu Pro Asp Tyr Val Leu Ser Asn Asp Lys Cys Val Pro Ser Ser
 4545 4550 4555 4560
 Glu Cys Gly Cys Lys Asp Ala His Gly Val Leu Ile Pro Glu Ser Lys
 4565 4570 4575
 Thr Trp Val Ser Arg Gly Cys Thr Lys Asn Cys Thr Cys Lys Gly Gly
 4580 4585 4590
 Thr Val Gln Cys His Asp Phe Ser Cys Pro Thr Gly Ser Arg Cys Leu
 4595 4600 4605
 Asp Asn Asn Glu Gly Asn Ser Asn Cys Val Thr Tyr Ala Leu Lys Cys
 4610 4615 4620
 Pro Ala His Ser Leu Tyr Thr Asn Cys Leu Pro Ser Cys Leu Pro Ser
 4625 4630 4635 4640
 Cys Ser Asp Pro Glu Gly Leu Cys Gly Gly Thr Ser Pro Glu Val Pro
 4645 4650 4655
 Ser Thr Cys Lys Glu Gly Cys Ile Cys Gln Ser Gly Tyr Val Leu His
 4660 4665 4670
 Lys Asn Lys Cys Met Leu Arg Ile His Cys Asp Cys Lys Asp Phe Gln
 4675 4680 4685
 Gly Ser Leu Ile Lys Thr Gly Gln Thr Trp Ile Ser Ser Gly Cys Ser
 4690 4695 4700
 Lys Ile Cys Thr Cys Lys Gly Gly Phe Phe Gln Cys Gln Ser Tyr Lys
 4705 4710 4715 4720
 Cys Pro Ser Gly Thr Gln Cys Glu Glu Ser Glu Asp Gly Ser Ser Asn
 4725 4730 4735
 Cys Val Ser Ser Thr Met Lys Cys Pro Ala Asn Ser Leu Tyr Thr His
 4740 4745 4750

Cys Leu Pro Thr Cys Leu Pro Ser Cys Ser Asn Pro Asp Gly Arg Cys
 4755 4760 4765
 Glu Gly Thr Ser His Lys Ala Pro Ser Thr Cys Arg Glu Gly Cys Val
 4770 4775 4780
 Cys Gln Pro Gly Tyr Leu Asn Lys Asp Thr Cys Val His Lys Asn
 4785 4790 4795 4800
 Gln Cys Gly Cys Lys Asp Ile Arg Gly Asn Ile Ile Pro Ala Gly Asn
 4805 4810 4815
 Thr Trp Ile Ser Ser Asp Cys Thr Gln Ser Cys Ala Cys Thr Asp Gly
 4820 4825 4830
 Val Ile Gln Cys Gln Asn Phe Val Cys Pro Ser Gly Ser His Cys Gln
 4835 4840 4845
 Tyr Asn Glu Asp Gly Ser Ser Asp Cys Ala Ala Asn Lys Leu Glu Arg
 4850 4855 4860
 Cys Thr Ile Phe Gly Asp Pro Tyr Tyr Leu Thr Phe Asp Gly Phe Thr
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Cys His Gln Ile Ile Ala Pro Glu Pro Phe Glu Gln Arg Cys Met Leu
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 <211> 5374
 <212> PRT
 <213> Mus musculus

<400> 75

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 Pro Met Val His Thr Ser Arg Glu Asp Ser Ile Leu Ser Lys Cys Asp
 35 40 45
 Phe Glu Asp Asn Ser Arg Pro Phe Cys Asp Trp Ser Gln Met Ser Ala
 50 55 60
 Asp Asp Gly Asp Trp Ile Arg Thr Thr Gly Pro Ser Leu Thr Gly Thr
 65 70 75 80
 Ser Gly Pro Pro Gly Gly Tyr Pro Asn Gly Glu Gly Tyr Tyr Leu His
 85 90 95
 Met Asp Pro Lys Thr Phe Pro Gln Gly Gly Val Ala Arg Leu Arg Ser
 100 105 110
 Pro Asp Ile Trp Glu Gln Gly Pro Leu Cys Val His Phe Ala Phe His
 115 120 125
 Met Phe Gly Leu Ser Trp Gly Ala Gln Leu Arg Leu Leu Leu Arg
 130 135 140
 Gly Arg Lys His Leu Arg Pro Tyr Val Leu Trp Lys His Val Asn Thr
 145 150 155 160
 Gln Ser Pro Ser Trp Met Pro Thr Thr Val Thr Val Pro Ala Asp His
 165 170 175
 Asp Ile Pro Ser Trp Leu Met Phe Glu Gly Met Arg Gly Asn Thr Ala
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 Tyr Leu Asp Ile Ser Leu Asp Gly Leu Ser Ile Gln Arg Gly Thr Cys
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 Asn Gln Val Cys Met Ser Gln Met Cys Thr Phe Asp Thr Leu Asn Asp
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 Leu Cys Gly Trp Ser Trp Val Pro Thr Ala Thr Gly Ala Lys Trp Thr
 225 230 235 240
 Gln Lys Lys Gly Pro Thr Gly Lys Gln Gly Val Gly Pro Ala Glu Asp
 245 250 255
 Phe Ser Asn Pro Gly Asn Gly Tyr Tyr Met Leu Leu Asp Ser Thr Asn
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 Arg Gly Cys Met Thr Leu Ser Phe His Tyr Ile Met His Gly Gln Gly
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 His Glu Glu Gly Leu Phe Val Tyr Ala Thr Phe Leu Gly Asn Ile Arg
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 Lys Tyr Thr Leu Phe Ser Gly His Pro Gly Pro Asp Trp Gln Ala Val
 Page 175

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 Ala Ser Pro Glu Glu Thr Ser Val Pro Pro Glu Val Thr Ile Leu Thr
 Page 176

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Pro	Ile	Val	Leu	Ile	Glu	Ala	Thr	Ala	Phe	Pro	Thr	Gly	Glu	Thr	Thr
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Leu	Tyr	Thr	Glu	Val	Pro	Thr	Val	Pro	Thr	Glu	Val	Thr	Gly	Val	His
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Thr	Glu	Val	Thr	Asn	Val	Ser	Pro	Glu	Glu	Thr	Ser	Val	Pro	Thr	Glu
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Leu	Pro	Thr	Glu	Val	Leu	Thr	Val	Pro	Ile	Glu	Val	Thr	Thr	Phe	Pro
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Thr	Gly	Glu	Thr	Thr	Val	Pro	Thr	Glu	Val	Pro	Thr	Val	Ser	Thr	Glu
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Met	Thr	Gly	Val	His	Thr	Glu	Val	Thr	Thr	Val	Phe	Pro	Glu	Glu	Thr
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Ser	Ile	Pro	Thr	Glu	Val	Ala	Thr	Val	Leu	Pro	Ala	Ser	Ile	Pro	Pro
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 Page 179

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 Page 180

2005

2015

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2065 2070 2075 2080
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 2485 2490 2495
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 2515 2520 2525
 Gly Lys Ser Trp Thr Ser Arg Gly Cys Ser Gln Ser Cys Asp Cys Met
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 Glu Gly Val Ile Arg Cys Gln Asn Phe Gln Cys Pro Ser Gly Thr Tyr
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 Page 183

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Page 184

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 Phe Pro Pro Cys Pro Pro Ser Cys Ser Asp Pro Glu Gly His Cys Glu
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 Ala Ser Gly Pro Arg Val Pro Ser Thr Cys Arg Glu Gly Cys Leu Cys
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Cys Gly Cys Lys Asp Ala Gln Gly Ala Leu Ile Pro Ser Gly Lys Thr
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Trp Thr Ser Pro Gly Arg Thr Gln Ser Cys Ala Cys Met Gly Gly Val
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 Page 189

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 <212> PRT
 <213> Homo sapiens

<400> 76

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Arg Asp Asn Tyr Val Leu Thr Gln Cys Asp Phe Glu Asp Asp Ala Lys
          35          40          45
Pro Leu Cys Asp Trp Ser Gln Val Ser Ala Asp Asp Glu Asp Trp Val
          50          55          60
Arg Ala Ser Gly Pro Ser Pro Thr Gly Ser Thr Gly Ala Pro Gly Gly
 65          70          75          80
Tyr Pro Asn Gly Glu Gly Ser Tyr Leu His Met Glu Ser Asn Ser Phe
          85          90          95
His Arg Gly Gly Val Ala Arg Leu Leu Ser Pro Asp Leu Trp Glu Gln
          100          105          110
Gly Pro Leu Cys Val His Phe Ala His His Met Phe Gly Leu Ser Trp
          115          120          125
Gly Ala Gln Leu Arg Leu Leu Leu Leu Ser Gly Glu Glu Gly Arg Arg
          130          135          140
Pro Asp Val Leu Trp Lys His Trp Asn Thr Gln Arg Pro Ser Trp Met
          145          150          155          160
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Gly Cys Tyr Met Leu Leu Asp Pro Lys Asn Ala Arg Pro Gly Gln Lys
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 610 615 620

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 Ile Pro Met Glu Lys Pro Thr Leu Pro Thr Glu Glu Thr Thr Thr Ser
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 Val Glu Glu Thr Thr Ile Ser Thr Glu Lys Leu Thr Ile Pro Met Glu
 835 840 845
 Lys Pro Thr Ile Ser Thr Glu Lys Pro Thr Ile Pro Thr Glu Lys Pro
 850 855 860
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 865 870 875 880
 Pro Thr Glu Lys Pro Thr Ile Pro Ile Glu Glu Thr Thr Ile Ser Thr
 885 890 895
 Glu Lys Leu Thr Ile Pro Thr Glu Lys Pro Thr Ile Ser Pro Glu Lys
 900 905 910
 Pro Thr Ile Ser Thr Glu Lys Pro Thr Ile Pro Thr Glu Lys Pro Thr
 915 920 925
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 Thr Glu Lys Pro Thr Ile Ser Pro Glu Lys Leu Thr Ile Pro Thr Glu
 945 950 955 960

Lys Pro Thr Ile Ser Thr Glu Lys Pro Thr Ile Pro Thr Glu Lys Leu
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 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: MAM domain
sequence

<400> 77

Cys Asp Phe Glu Asp Gly Ser His Pro Phe Cys Gly Trp Ser Gln Asp
 1 5 10 15
 Ser Gly Asp Asp Gly Asp Asp Leu Gln Trp Thr Arg Val Asn Ser Ala
 20 25 30
 Thr Gly Gly Ser Thr Gly Pro Arg Gly Asp His Thr Thr Gly Asn Gly
 35 40 45
 His Tyr Met Tyr Val Asp Thr Ser Ser Gly Leu Leu Gln Glu Gly Gln
 50 55 60
 Lys Ala Arg Leu Leu Ser Pro Pro Leu Pro Pro Asn Arg Ser Pro Glu
 65 70 75 80
 Cys Cys Leu Thr Phe Trp Tyr His Met Tyr Gly Ser Gly Val Gly Thr
 85 90 95
 Pro Gly Leu Asn Val Tyr Val Arg Glu Asn Gly Glu Thr Leu Leu Trp
 100 105 110
 Ser Arg Ser Gly His Gln Gly Gly Gln Trp Leu Leu Ala Glu Val Thr
 115 120 125
 Leu Pro Thr Phe Ser Thr Lys Pro Phe Gln Val Val Phe Glu Gly Thr
 130 135 140
 Arg Gly Gly Gly Ser Arg Gly Gly Ile Ala Leu Asp Asp Ile Ser Leu
 145 150 155 160
 Ser Thr His Ile Glu Gly Pro Cys Asn Gln
 165 170

<210> 78

<211> 170

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: MAM domain
sequence

<400> 78

Cys Asp Phe Glu Asp Gly Ser His Pro Phe Cys Gly Trp Ser Gln Asp
 1 5 10 15
 Ser Gly Asp Asp Gly Asp Asp Leu Gln Trp Thr Arg Val Asn Ser Ala
 20 25 30
 Thr Gly Gly Ser Thr Gly Pro Arg Gly Asp His Thr Thr Gly Asn Gly
 35 40 45
 His Tyr Met Tyr Val Asp Thr Ser Ser Gly Leu Leu Gln Glu Gly Gln
 50 55 60
 Lys Ala Arg Leu Leu Ser Pro Pro Leu Pro Pro Asn Arg Ser Pro Glu
 65 70 75 80

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Cys Cys Leu Thr Phe Trp Tyr His Met Tyr Gly Ser Gly Val Gly Thr
 85 90 95
 Pro Gly Leu Asn Val Tyr Val Arg Glu Asn Gly Glu Thr Leu Leu Trp
 100 105 110
 Ser Arg Ser Gly His Gln Gly Gly Gln Trp Leu Leu Ala Glu Val Thr
 115 120 125
 Leu Pro Thr Phe Ser Thr Lys Pro Phe Gln Val Val Phe Glu Gly Thr
 130 135 140
 Arg Gly Gly Gly Ser Arg Gly Gly Ile Ala Leu Asp Asp Ile Ser Leu
 145 150 155 160
 Ser Thr His Ile Glu Gly Pro Cys Asn Gln
 165 170

<210> 79
 <211> 812
 <212> PRT
 <213> Homo sapiens

<400> 79
 Met Gly Trp Arg Pro Arg Arg Ala Arg Gly Thr Pro Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Leu Leu Leu Leu Trp Pro Val Pro Gly Ala Gly Val Leu Gln
 20 25 30
 Gly His Ile Pro Gly Gln Pro Val Thr Pro His Trp Val Leu Asp Gly
 35 40 45
 Gln Pro Trp Arg Thr Val Ser Leu Glu Glu Pro Val Ser Lys Pro Asp
 50 55 60
 Met Gly Leu Val Ala Leu Glu Ala Glu Gly Gln Glu Leu Leu Leu Glu
 65 70 75 80
 Leu Glu Lys Asn His Arg Leu Leu Ala Pro Gly Tyr Ile Glu Thr His
 85 90 95
 Tyr Gly Pro Asp Gly Gln Pro Val Val Leu Ala Pro Asn His Thr Asp
 100 105 110
 His Cys His Tyr Gln Gly Arg Val Arg Gly Phe Pro Asp Ser Trp Val
 115 120 125
 Val Leu Cys Thr Cys Ser Gly Met Ser Gly Leu Ile Thr Leu Ser Arg
 130 135 140
 Asn Ala Ser Tyr Tyr Leu Arg Pro Trp Pro Pro Arg Gly Ser Lys Asp
 145 150 155 160
 Phe Ser Thr His Glu Ile Phe Arg Met Glu Gln Leu Leu Thr Trp Lys
 165 170 175
 Gly Thr Cys Gly His Arg Asp Pro Gly Asn Lys Ala Gly Met Thr Ser
 180 185 190
 Leu Pro Gly Gly Pro Gln Ser Arg Gly Arg Arg Glu Ala Arg Arg Thr
 Page 200

195 200 205
 Arg Lys Tyr Leu Glu Leu Tyr Ile Val Ala Asp His Thr Leu Phe Leu
 210 215 220
 Thr Arg His Arg Asn Leu Asn His Thr Lys Gln Arg Leu Leu Glu Val
 225 230 235 240
 Ala Asn Tyr Val Asp Gln Leu Leu Arg Thr Leu Asp Ile Gln Val Ala
 245 250 255
 Leu Thr Gly Leu Glu Val Trp Thr Glu Arg Asp Arg Ser Arg Val Thr
 260 265 270
 Gln Asp Ala Asn Ala Thr Leu Trp Ala Phe Leu Gln Trp Arg Arg Gly
 275 280 285
 Leu Trp Ala Gln Arg Pro His Asp Ser Ala Gln Leu Leu Thr Gly Arg
 290 295 300
 Ala Phe Gln Gly Ala Thr Val Gly Leu Ala Pro Val Glu Gly Met Cys
 305 310 315 320
 Arg Ala Glu Ser Ser Gly Gly Val Ser Thr Asp His Ser Glu Leu Pro
 325 330 335
 Ile Gly Ala Ala Ala Thr Met Ala His Glu Ile Gly His Ser Leu Gly
 340 345 350
 Leu Ser His Asp Pro Asp Gly Cys Cys Val Glu Ala Ala Ala Glu Ser
 355 360 365
 Gly Gly Cys Val Met Ala Ala Ala Thr Gly His Pro Phe Pro Arg Val
 370 375 380
 Phe Ser Ala Cys Ser Arg Arg Gln Leu Arg Ala Phe Phe Arg Lys Gly
 385 390 395 400
 Gly Gly Ala Cys Leu Ser Asn Ala Pro Asp Pro Gly Leu Pro Val Pro
 405 410 415
 Pro Ala Leu Cys Gly Asn Gly Phe Val Glu Ala Gly Glu Glu Cys Asp
 420 425 430
 Cys Gly Pro Gly Gln Glu Cys Arg Asp Leu Cys Cys Phe Ala His Asn
 435 440 445
 Cys Ser Leu Arg Pro Gly Ala Gln Cys Ala His Gly Asp Cys Cys Val
 450 455 460
 Arg Cys Leu Leu Lys Pro Ala Gly Ala Leu Cys Arg Gln Ala Met Gly
 465 470 475 480
 Asp Cys Asp Leu Pro Glu Phe Cys Thr Gly Thr Ser Ser His Cys Pro
 485 490 495
 Pro Asp Val Tyr Leu Leu Asp Gly Ser Pro Cys Ala Arg Gly Ser Gly
 500 505 510
 Tyr Cys Trp Asp Gly Ala Cys Pro Thr Leu Glu Gln Gln Cys Gln Gln
 515 520 525
 Leu Trp Gly Pro Gly Ser His Pro Ala Pro Glu Ala Cys Phe Gln Val
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540

530 535
Val Asn Ser Ala Gly Asp Ala His Gly Asn Cys Gly Gln Asp Ser Glu
545 550 555 560
Gly His Phe Leu Pro Cys Ala Gly Arg Asp Ala Leu Cys Gly Lys Leu
565 570 575
Gln Cys Gln Gly Gly Lys Pro Ser Leu Leu Ala Pro His Met Val Pro
580 585 590
Val Asp Ser Thr Val His Leu Asp Gly Gln Glu Val Thr Cys Arg Gly
595 600 605
Ala Leu Ala Leu Pro Ser Ala Gln Leu Asp Leu Leu Gly Leu Gly Leu
610 615 620
Val Glu Pro Gly Thr Gln Cys Gly Pro Arg Met Val Cys Gln Ser Arg
625 630 635 640
Arg Cys Arg Lys Asn Ala Phe Gln Glu Leu Gln Arg Cys Leu Thr Ala
645 650 655
Cys His Ser His Gly Val Cys Asn Ser Asn His Asn Cys His Cys Ala
660 665 670
Pro Gly Trp Ala Pro Pro Phe Cys Asp Lys Pro Gly Phe Gly Gly Ser
675 680 685
Met Asp Ser Gly Pro Val Gln Ala Glu Asn His Asp Thr Phe Leu Leu
690 695 700
Ala Met Leu Leu Ser Val Leu Leu Pro Leu Leu Pro Gly Ala Gly Leu
705 710 715 720
Ala Trp Cys Cys Tyr Arg Leu Pro Gly Ala His Leu Gln Arg Cys Ser
725 730 735
Trp Gly Cys Arg Arg Asp Pro Ala Cys Ser Gly Pro Lys Asp Gly Pro
740 745 750
His Arg Asp His Pro Leu Gly Gly Val His Pro Met Glu Leu Gly Pro
755 760 765
Thr Ala Thr Gly Gln Pro Trp Pro Leu Asp Pro Glu Asn Ser His Glu
770 775 780
Pro Ser Ser His Pro Glu Lys Pro Leu Pro Ala Val Ser Pro Asp Pro
785 790 795 800
Gln Asp Gln Val Gln Met Pro Arg Ser Cys Leu Trp
805 810

<210> 80
<211> 728
<212> PRT
<213> Homo sapiens

<400> 80
Arg Leu Leu Ala Pro Gly Tyr Ile Glu Thr His Tyr Gly Pro Asp Gly
1 5 10 15

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Gln Pro Val Val Leu Ala Pro Asn His Thr Asp His Cys His Tyr Gln
 20 25 30
 Gly Arg Val Arg Gly Phe Pro Asp Ser Trp Val Val Leu Cys Thr Cys
 35 40 45
 Ser Gly Met Ser Gly Leu Ile Thr Leu Ser Arg Asn Ala Ser Tyr Tyr
 50 55 60
 Leu Arg Pro Trp Pro Pro Arg Gly Ser Lys Asp Phe Ser Thr His Glu
 65 70 75 80
 Ile Phe Arg Met Glu Gln Leu Leu Thr Trp Lys Gly Thr Cys Gly His
 85 90 95
 Arg Asp Pro Gly Asn Lys Ala Gly Met Thr Ser Leu Pro Gly Gly Pro
 100 105 110
 Gln Ser Arg Gly Arg Arg Glu Ala Arg Arg Thr Arg Lys Tyr Leu Glu
 115 120 125
 Leu Tyr Ile Val Ala Asp His Thr Leu Phe Leu Thr Arg His Arg Asn
 130 135 140
 Leu Asn His Thr Lys Gln Arg Leu Leu Glu Val Ala Asn Tyr Val Asp
 145 150 155 160
 Gln Leu Leu Arg Thr Leu Asp Ile Gln Val Ala Leu Thr Gly Leu Glu
 165 170 175
 Val Trp Thr Glu Arg Asp Arg Ser Arg Val Thr Gln Asp Ala Asn Ala
 180 185 190
 Thr Leu Trp Ala Phe Leu Gln Trp Arg Arg Gly Leu Trp Ala Gln Arg
 195 200 205
 Pro His Asp Ser Ala Gln Leu Leu Thr Gly Arg Ala Phe Gln Gly Ala
 210 215 220
 Thr Val Gly Leu Ala Pro Val Glu Gly Met Cys Arg Ala Glu Ser Ser
 225 230 235 240
 Gly Gly Val Ser Thr Asp His Ser Glu Leu Pro Ile Gly Ala Ala Ala
 245 250 255
 Thr Met Ala His Glu Ile Gly His Ser Leu Gly Leu Ser His Asp Pro
 260 265 270
 Asp Gly Cys Cys Val Glu Ala Ala Ala Glu Ser Gly Gly Cys Val Met
 275 280 285
 Ala Ala Ala Thr Gly His Pro Phe Pro Arg Val Phe Ser Ala Cys Ser
 290 295 300
 Arg Arg Gln Leu Arg Ala Phe Phe Arg Lys Gly Gly Gly Ala Cys Leu
 305 310 315 320
 Ser Asn Ala Pro Asp Pro Gly Leu Pro Val Pro Pro Ala Leu Cys Gly
 325 330 335
 Asn Gly Phe Val Glu Ala Gly Glu Glu Cys Asp Cys Gly Pro Gly Gln
 340 345 350

Glu Cys Arg Asp Leu Cys Cys Phe Ala His Asn Cys Ser Leu Arg Pro
 355 360 365
 Gly Ala Gln Cys Ala His Gly Asp Cys Cys Val Arg Cys Leu Leu Lys
 370 375 380
 Pro Ala Gly Ala Leu Cys Arg Gln Ala Met Gly Asp Cys Asp Leu Pro
 385 390 395 400
 Glu Phe Cys Thr Gly Thr Ser Ser His Cys Pro Pro Asp Val Tyr Leu
 405 410 415
 Leu Asp Gly Ser Pro Cys Ala Arg Gly Ser Gly Tyr Cys Trp Asp Gly
 420 425 430
 Ala Cys Pro Thr Leu Glu Gln Gln Cys Gln Gln Leu Trp Gly Pro Gly
 435 440 445
 Ser His Pro Ala Pro Glu Ala Cys Phe Gln Val Val Asn Ser Ala Gly
 450 455 460
 Asp Ala His Gly Asn Cys Gly Gln Asp Ser Glu Gly His Phe Leu Pro
 465 470 475 480
 Cys Ala Gly Arg Asp Ala Leu Cys Gly Lys Leu Gln Cys Gln Gly Gly
 485 490 495
 Lys Pro Ser Leu Leu Ala Pro His Met Val Pro Val Asp Ser Thr Val
 500 505 510
 His Leu Asp Gly Gln Glu Val Thr Cys Arg Gly Ala Leu Ala Leu Pro
 515 520 525
 Ser Ala Gln Leu Asp Leu Leu Gly Leu Gly Leu Val Glu Pro Gly Thr
 530 535 540
 Gln Cys Gly Pro Arg Met Val Cys Gln Ser Arg Arg Cys Arg Lys Asn
 545 550 555 560
 Ala Phe Gln Glu Leu Gln Arg Cys Leu Thr Ala Cys His Ser His Gly
 565 570 575
 Val Cys Asn Ser Asn His Asn Cys His Cys Ala Pro Gly Trp Ala Pro
 580 585 590
 Pro Phe Cys Asp Lys Pro Gly Phe Gly Gly Ser Met Asp Ser Gly Pro
 595 600 605
 Val Gln Ala Glu Asn His Asp Thr Phe Leu Leu Ala Met Leu Leu Ser
 610 615 620
 Val Leu Leu Pro Leu Leu Pro Gly Ala Gly Leu Ala Trp Cys Cys Tyr
 625 630 635 640
 Arg Leu Pro Gly Ala His Leu Gln Arg Cys Ser Trp Gly Cys Arg Arg
 645 650 655
 Asp Pro Ala Cys Ser Gly Pro Lys Asp Gly Pro His Arg Asp His Pro
 660 665 670
 Leu Gly Gly Val His Pro Met Glu Leu Gly Pro Thr Ala Thr Gly Gln
 675 680 685

Pro Trp Pro Leu Asp Pro Glu Asn Ser His Glu Pro Ser Ser His Pro
690 695 700

Glu Lys Pro Leu Pro Ala Val Ser Pro Asp Pro Gln Ala Asp Gln Val
705 710 715 720

Gln Met Pro Arg Ser Cys Leu Trp
725

<210> 81

<211> 802

<212> PRT

<213> Homo sapiens

<400> 81

Met Gly Trp Arg Pro Arg Arg Ala Arg Gly Thr Pro Leu Leu Leu Leu
1 5 10 15

Leu Leu Leu Leu Leu Leu Trp Pro Val Pro Gly Ala Gly Val Leu Gln
20 25 30

Gly His Ile Pro Gly Gln Pro Val Thr Pro His Trp Val Leu Asp Gly
35 40 45

Gln Pro Trp Arg Thr Val Ser Leu Glu Glu Pro Val Ser Lys Pro Asp
50 55 60

Met Gly Leu Val Ala Leu Glu Ala Glu Gly Gln Glu Leu Leu Leu Glu
65 70 75 80

Leu Glu Lys Asn His Arg Leu Leu Ala Pro Gly Tyr Ile Glu Thr His
85 90 95

Tyr Gly Pro Asp Gly Gln Pro Val Val Leu Ala Pro Asn His Thr Asp
100 105 110

His Cys His Tyr Gln Gly Arg Val Arg Gly Phe Pro Asp Ser Trp Val
115 120 125

Val Leu Cys Thr Cys Ser Gly Met Ser Gly Leu Ile Thr Leu Ser Arg
130 135 140

Asn Ala Ser Tyr Tyr Leu Arg Pro Trp Pro Arg Gly Ser Lys Asp
145 150 155 160

Phe Ser Thr His Glu Ile Phe Arg Met Glu Gln Leu Leu Thr Trp Lys
165 170 175

Gly Thr Cys Gly His Arg Asp Pro Gly Asn Lys Ala Gly Met Thr Ser
180 185 190

Leu Pro Gly Gly Pro Gln Ser Arg Gly Arg Arg Glu Ala Arg Arg Thr
195 200 205

Arg Lys Tyr Leu Glu Leu Tyr Ile Val Ala Asp His Thr Leu Phe Leu
210 215 220

Thr Arg His Arg Asn Leu Asn His Thr Lys Gln Arg Leu Leu Glu Val
225 230 235 240

Ala Asn Tyr Val Asp Gln Leu Leu Arg Thr Leu Asp Ile Gln Val Ala
245 250 255

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Leu Thr Gly Leu Glu Val Trp Thr Glu Arg Asp Arg Ser Arg Val Thr
 260 265 270
 Gln Asp Ala Asn Ala Thr Leu Trp Ala Phe Leu Gln Trp Arg Arg Gly
 275 280 285
 Leu Trp Ala Gln Arg Pro His Asp Ser Ala Gln Leu Leu Thr Gly Arg
 290 295 300
 Ala Phe Gln Gly Ala Thr Val Gly Leu Ala Pro Val Glu Gly Met Cys
 305 310 315 320
 Arg Ala Glu Ser Ser Gly Gly Val Ser Thr Asp His Ser Glu Leu Pro
 325 330 335
 Ile Gly Ala Ala Ala Thr Met Ala His Glu Ile Gly His Ser Leu Gly
 340 345 350
 Leu Ser His Asp Pro Asp Gly Cys Cys Val Glu Ala Ala Ala Glu Ser
 355 360 365
 Gly Gly Cys Val Met Ala Ala Ala Thr Gly His Pro Phe Pro Arg Val
 370 375 380
 Phe Ser Ala Cys Ser Arg Arg Gln Leu Arg Ala Phe Phe Arg Lys Gly
 385 390 395 400
 Gly Gly Ala Cys Leu Ser Asn Ala Pro Asp Pro Gly Leu Pro Val Pro
 405 410 415
 Pro Ala Leu Cys Gly Asn Gly Phe Val Glu Ala Gly Glu Glu Cys Asp
 420 425 430
 Cys Gly Pro Gly Gln Glu Cys Arg Asp Leu Cys Cys Phe Ala His Asn
 435 440 445
 Cys Ser Leu Arg Pro Gly Ala Gln Cys Ala His Gly Asp Cys Cys Val
 450 455 460
 Arg Cys Leu Leu Lys Pro Ala Gly Ala Leu Cys Arg Gln Ala Met Gly
 465 470 475 480
 Asp Cys Asp Leu Pro Glu Phe Cys Thr Gly Thr Ser Ser His Cys Pro
 485 490 495
 Pro Asp Val Tyr Leu Leu Asp Gly Ser Pro Cys Ala Arg Gly Ser Gly
 500 505 510
 Tyr Cys Trp Asp Gly Ala Cys Pro Thr Leu Glu Gln Gln Cys Gln Gln
 515 520 525
 Leu Trp Gly Pro Gly Ser His Pro Ala Pro Glu Ala Cys Phe Gln Val
 530 535 540
 Val Asn Ser Ala Gly Asp Ala His Gly Asn Cys Gly Gln Asp Ser Glu
 545 550 555 560
 Gly His Phe Leu Pro Cys Ala Gly Arg Asp Ala Leu Cys Gly Lys Leu
 565 570 575
 Gln Cys Gln Gly Gly Lys Pro Ser Leu Leu Ala Pro His Met Val Pro
 580 585 590

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Val Asp Ser Thr Val His Leu Asp Gly Gln Glu Val Thr Cys Arg Gly
 595 600 605
 Ala Leu Ala Leu Pro Ser Ala Gln Leu Asp Leu Leu Gly Leu Gly Leu
 610 615 620
 Val Glu Pro Gly Thr Gln Cys Gly Pro Arg Met Val Cys Gln Ser Arg
 625 630 635 640
 Arg Cys Arg Lys Asn Ala Phe Gln Glu Leu Gln Arg Cys Leu Thr Ala
 645 650 655
 Cys His Ser His Gly Ala Gly Leu His Pro Ser Val Thr Ser Gln Ala
 660 665 670
 Leu Val Ala Ala Trp Thr Val Ala Leu Cys Arg Leu Lys Thr Met Thr
 675 680 685
 Pro Ser Cys Trp Pro Cys Ser Ser Ala Ser Cys Cys Leu Cys Ser Gln
 690 695 700
 Gly Pro Ala Trp Pro Gly Val Ala Thr Asp Ser Gln Glu Pro Ile Cys
 705 710 715 720
 Ser Asp Ala Ala Gly Ala Ala Glu Gly Thr Leu Arg Ala Val Ala Pro
 725 730 735
 Lys Met Ala His Thr Gly Thr Thr Pro Trp Ala Ala Phe Thr Pro Trp
 740 745 750
 Ser Trp Ala Pro Gln Pro Leu Asp Ser Pro Gly Pro Trp Thr Leu Arg
 755 760 765
 Thr Leu Met Ser Pro Ala Ala Thr Leu Arg Ser Leu Cys Gln Gln Ser
 770 775 780
 Arg Leu Thr Pro Lys Ile Lys Ser Arg Cys Gln Asp Pro Ala Ser Gly
 785 790 795 800
 Glu Arg

<210> 82
 <211> 685
 <212> PRT
 <213> Mus musculus

<400> 82
 Asp His Cys Gln Tyr His Gly Arg Val Arg Gly Phe Arg Glu Ser Trp
 1 5 10 15
 Val Val Leu Ser Thr Cys Ser Gly Met Ser Gly Leu Ile Val Leu Ser
 20 25 30
 Ser Lys Val Ser Tyr Tyr Leu Gln Pro Arg Thr Pro Gly Asp Thr Lys
 35 40 45
 Asp Phe Pro Thr His Glu Ile Phe Arg Met Glu Gln Leu Phe Thr Trp
 50 55 60
 Arg Gly Val Gln Arg Asp Lys Asn Ser Gln Tyr Lys Ala Gly Met Ala
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65		70		75		80									
Ser	Leu	Pro	His	Val ₈₅	Pro	Gln	Ser	Arg	Val ₉₀	Arg	Arg	Glu	Ala	Arg ₉₅	Arg
Ser	Pro	Arg	Tyr ₁₀₀	Leu	Glu	Leu	Tyr	Ile ₁₀₅	Val	Ala	Asp	His	Thr ₁₁₀	Leu	Phe
Leu	Leu	Gln ₁₁₅	His	Gln	Asn	Leu	Asn ₁₂₀	His	Thr	Arg	Gln	Arg ₁₂₅	Leu	Leu	Glu
Val	Ala ₁₃₀	Asn	Cys	Val	Asp	Gln ₁₃₅	Ile	Leu	Arg	Thr	Leu ₁₄₀	Asp	Ile	Gln	Leu
Val ₁₄₅	Leu	Thr	Gly	Leu	Glu ₁₅₀	Val	Trp	Thr	Glu	Gln ₁₅₅	Asp	Leu	Ser	Arg	Ile ₁₆₀
Thr	Gln	Asp	Ala	Asn ₁₆₅	Glu	Thr	Leu	Trp	Ala ₁₇₀	Phe	Leu	Gln	Trp	Arg ₁₇₅	Arg
Gly	Val	Trp	Ala ₁₈₀	Arg	Arg	Pro	His	Asp ₁₈₅	Ser	Thr	Gln	Leu	Leu ₁₉₀	Thr	Gly
Arg	Thr	Phe ₁₉₅	Gln	Gly	Thr	Thr	Val ₂₀₀	Gly	Leu	Ala	Pro	Val ₂₀₅	Glu	Asp	Met
Pro	Arg	Gly	Glu	Leu	Ser	Phe ₂₁₅	Gly	Gly	Val	Ser	Thr ₂₂₀	Asp	His	Ser	Glu
Leu ₂₂₅	Pro	Ile	Gly	Thr	Ala ₂₃₀	Ala	Thr	Met	Ala	His ₂₃₅	Glu	Ile	Gly	His	Ser ₂₄₀
Leu	Gly	Leu	His	His ₂₄₅	Asp	Pro	Glu	Gly	Cys ₂₅₀	Cys	Val	Gln	Ala	Asp ₂₅₅	Ala
Glu	Gln	Gly	Gly ₂₆₀	Cys	Val	Met	Glu	Ala ₂₆₅	Ala	Thr	Gly	His	Pro ₂₇₀	Phe	Pro
Arg	Val	Phe ₂₇₅	Ser	Ala	Cys	Ser	Arg ₂₈₀	Arg	Gln	Leu	Arg	Thr ₂₈₅	Phe	Phe	Arg
Lys	Gly ₂₉₀	Gly	Gly	Pro	Cys	Leu ₂₉₅	Ser	Asn	Thr	Ser	Ala ₃₀₀	Pro	Gly	Leu	Leu
Val ₃₀₅	Leu	Pro	Ser	Arg	Cys ₃₁₀	Gly	Asn	Gly	Phe	Leu ₃₁₅	Glu	Ala	Gly	Glu	Glu ₃₂₀
Cys	Asp	Cys	Gly	Ser ₃₂₅	Gly	Gln	Lys	Cys	Pro ₃₃₀	Asp	Pro	Cys	Cys	Phe ₃₃₅	Ala
His	Asn	Cys	Ser ₃₄₀	Leu	Arg	Ala	Gly	Ala ₃₄₅	Gln	Cys	Ala	His	Gly ₃₅₀	Asp	Cys
Cys	Ala	Arg ₃₅₅	Cys	Leu	Leu	Lys	Ser ₃₆₀	Ala	Gly	Thr	Pro	Cys ₃₆₅	Arg	Pro	Ala
Ala	Thr	Asp	Cys	Asp	Leu	Pro ₃₇₅	Glu	Phe	Cys	Thr	Gly ₃₈₀	Thr	Ser	Pro	Tyr
Cys ₃₈₅	Pro	Ala	Asp	Val ₃₉₀	Tyr	Leu	Leu	Asp	Gly	Ser ₃₉₅	Pro	Cys	Ala	Glu	Gly ₄₀₀
Arg	Gly	Tyr	Cys	Leu	Asp	Gly	Trp	Cys	Pro	Thr	Leu	Glu	Gln	Gln	Cys

405 410 415
 Gln Gln Leu Trp Gly Pro Gly Ser Lys Pro Ala Pro Glu Pro Cys Phe
 420 425 430
 Gln Gln Met Asn Ser Met Gly Asn Ser Gln Gly Asn Cys Gly Gln Asp
 435 440 445
 His Lys Gly Ser Phe Leu Pro Cys Ala Gln Arg Asp Ala Leu Cys Gly
 450 455 460
 Lys Leu Leu Cys Gln Gly Gly Glu Pro Asn Pro Leu Val Pro His Ile
 465 470 475 480
 Val Thr Met Asp Ser Thr Ile Leu Leu Glu Gly Arg Glu Val Val Cys
 485 490 495
 Arg Gly Ala Phe Val Leu Pro Asp Ser His Leu Asp Gln Leu Asp Leu
 500 505 510
 Gly Leu Val Glu Pro Gly Thr Gly Cys Gly Pro Arg Met Val Cys Gln
 515 520 525
 Asp Arg His Cys Gln Asn Ala Thr Ser Gln Glu Leu Glu Arg Cys Leu
 530 535 540
 Thr Ala Cys His Asn Gly Gly Val Cys Asn Ser Asn Arg Asn Cys His
 545 550 555 560
 Cys Ala Ala Gly Trp Ala Pro Pro Phe Cys Asp Lys Pro Gly Leu Gly
 565 570 575
 Gly Ser Val Asp Ser Gly Pro Ala Gln Ser Ala Asn Arg Asp Ala Phe
 580 585 590
 Pro Leu Ala Met Leu Leu Ser Phe Leu Leu Pro Leu Leu Pro Gly Ala
 595 600 605
 Gly Leu Ala Trp Cys Tyr Gln Leu Pro Thr Phe Cys His Arg Arg Gly
 610 615 620
 Leu Cys Cys Arg Arg Asp Pro Leu Trp Asn Arg Asp Ile Pro Leu Gly
 625 630 635 640
 Ser Val His Pro Val Glu Phe Gly Ser Ile Ile Thr Gly Glu Pro Ser
 645 650 655
 Pro Pro Pro Pro Trp Thr Ser Cys Gln Gln Arg Ser His Pro Pro Ser
 660 665 670
 Leu Asp Leu Leu Ser Asp Pro Ala Asn Ser Glu Leu Thr
 675 680 685

<210> 83
 <211> 914
 <212> PRT
 <213> *Xenopus laevis*

<400> 83
 Met Gly Thr Glu Gly Arg Leu Ser Thr Trp Leu Gly Leu Gly Ala Val
 1 5 10 15

Ile Val Gly Leu Leu Leu Pro Pro Val Leu Thr Leu Gly Ala His Gln
 20 25 30
 Gly Glu Leu Val Thr Ala Phe Trp Leu Gln Asn Gly Arg Ala Lys Arg
 35 40 45
 Ser Val Asp Leu Leu Asp Lys Gly Thr Pro Asp Gly Gly Glu Ile Leu
 50 55 60
 Val Ser Ser Glu Gly Arg Lys Phe Ile Leu Lys Val Glu Arg Asn His
 65 70 75 80
 Leu Leu Phe Ala Pro Gly Tyr Thr Glu Thr His Tyr Thr Asp Gly Gln
 85 90 95
 Met Val Thr Leu Ser Pro Asn His Thr Glu His Cys Tyr Tyr His Gly
 100 105 110
 Gln Val Glu Asn Tyr Asp Glu Ser Ser Val Ala Leu Thr Thr Cys Ser
 115 120 125
 Gly Ile Ser Gly Leu Ile Trp Leu Ser Thr Asn Asn Ser Tyr Tyr Leu
 130 135 140
 Lys Pro Leu Glu Val Pro Gly Lys Glu Thr His Thr Leu Val Arg Thr
 145 150 155 160
 Glu His Leu Leu Ile Lys Glu Gly Ser Cys Gly His Asp Gly His Ser
 165 170 175
 Gly Ser Thr Ala Ser Tyr Leu Gln Glu Phe Thr Ala Pro Ser Ser His
 180 185 190
 His His Arg Val Arg Arg Asn Val Trp Arg Ser Gln Lys Tyr Met Glu
 195 200 205
 Leu Phe Ile Val Ala Asp Tyr Ser Met Phe Met Lys Gln Asn Arg Asn
 210 215 220
 Leu Gly Ser Thr Lys Gln Arg Val Leu Glu Ile Ala Asn Tyr Val Asp
 225 230 235 240
 Lys Phe Tyr Met Ser Met Asn Ile Lys Val Ala Leu Ile Gly Leu Glu
 245 250 255
 Val Trp Thr Glu Arg Asp Gln Cys Glu Val Asn Asp Asp Ala Asn Asp
 260 265 270
 Ser Leu Lys Ser Phe Leu Gln Trp Lys Gln Lys Leu Arg Ser Arg Lys
 275 280 285
 Lys His Asp Asn Ala Gln Leu Ile Thr Gly Val Thr Phe Lys Gly Thr
 290 295 300
 Thr Ile Gly Met Ala Pro Leu Glu Gly Met Cys Thr Ala Glu Asn Ser
 305 310 315 320
 Gly Gly Val Ser Met Asp His Ser Glu Asn Ala Ile Gly Ala Ala Ala
 325 330 335
 Thr Met Ala His Glu Ile Gly His Asn Phe Gly Met Ser His Asp Asp
 340 345 350

Gly Cys Cys Val Glu Ala Thr Pro Glu Gln Gly Gly Cys Ile Met Ala
 355 360 365
 Ala Ala Thr Gly His Pro Phe Pro Arg Lys Phe Ser Ser Cys Ser Gln
 370 375 380
 Lys Gln Leu Met Ser Tyr Phe Gln Lys Gly Gly Gly Met Cys Leu Phe
 385 390 395 400
 Asn Met Pro Asn Thr Lys Asp Leu Val Met Gly Lys Lys Cys Gly Asn
 405 410 415
 Gly Phe Leu Glu Glu Gly Glu Gln Cys Asp Cys Gly Glu Pro Glu Glu
 420 425 430
 Cys Thr Asn Ser Cys Cys Asn Ala Asn Asn Cys Thr Leu Lys Ala Gly
 435 440 445
 Ala Gln Cys Ala His Gly Glu Cys Cys Gln Asp Cys Lys Leu Lys Ser
 450 455 460
 Ala Gly Thr Gln Cys Arg Glu Met Ala Gly Ser Cys Asp Leu Pro Glu
 465 470 475 480
 Phe Cys Thr Gly Asp Ala Pro Ser Cys Pro Ser Asn Val Tyr Lys Leu
 485 490 495
 Asp Gly Ser Leu Cys Ala Asp Gly Asn Ala Tyr Cys Tyr Asn Gly Met
 500 505 510
 Cys Leu Thr His Gln Gln Gln Cys Ile His Leu Trp Gly Ser Gly Ala
 515 520 525
 Val Val Ala Pro Asn Phe Cys Phe Gln Asp Val Asn Lys Ala Gly Asp
 530 535 540
 Gln Tyr Gly Asn Cys Gly Lys Asn Gly Arg Gly Gln Phe Val Lys Cys
 545 550 555 560
 Thr Ser Arg Asp Ala Lys Cys Gly Lys Ile Gln Cys Gln Thr Ser Ser
 565 570 575
 Glu Lys Pro Arg Asp Pro Ser Met Val Lys Val Asp Asn Thr Ile Ile
 580 585 590
 Ile Asn Gly Tyr Lys Met Lys Cys Gln Gly Val His Ala Tyr Ser Met
 595 600 605
 Gln Glu Glu Glu Gly Asp Pro Gly Leu Val Met Thr Gly Thr Lys Cys
 610 615 620
 Gly Asp Gly Met Val Cys Lys Asp Arg Arg Cys Gln Asn Ala Ser Phe
 625 630 635 640
 Phe Glu Leu Asp Gln Cys Val Ser Lys Cys Asn Gly His Gly Val Cys
 645 650 655
 Asn Ser Asn Arg Asn Cys His Cys Asp Ser Gly Trp Ala Pro Pro Tyr
 660 665 670
 Cys Asp Lys Pro Gly Pro Gly Gly Ser Gln Asp Ser Gly Pro Ala Pro
 675 680 685

Ser Asp Leu Pro Val Gly Val Thr Ile Phe Leu Val Ile Leu Phe Leu
 690 695 700
 Val Leu Leu Leu Ala Leu Ala Phe Ala Met Val Tyr Trp Tyr Arg Lys
 705 710 715 720
 Pro Gly Ser Leu Leu Asn Arg Trp Leu Met Lys Ser Lys Ala Lys Cys
 725 730 735
 Ser Leu Cys Lys Ala Thr Gln Pro Lys Ala Asn Arg Ala Tyr Ser Ser
 740 745 750
 Arg Ile Phe Thr Leu Arg Asn Ile Ser Tyr Pro Val Lys Ser Thr Ser
 755 760 765
 Lys Glu Thr Arg Ser Arg Asp Ile Phe Gln Gly Lys Thr Thr Ala Ala
 770 775 780
 Gln Asn Ser Ser Gln Pro Val Asn Val Val Arg Pro Leu Arg Pro Ala
 785 790 795 800
 Pro Ser Pro Val Ile Gln His Gly Val Gln Val Lys Pro Leu Arg Pro
 805 810 815
 Pro Pro Pro Pro Met Lys Pro Ser Pro Ile Leu Pro Ala Lys Glu Gln
 820 825 830
 Thr Val His Val Lys Leu Leu Pro Pro Lys Lys Pro Leu Pro Ser Cys
 835 840 845
 Pro Ile Arg Thr Gln Gln Leu Asn Pro Pro Ser Lys Pro Leu Pro Val
 850 855 860
 Thr Pro Ala His Lys Glu Pro Leu Leu Val Leu Thr Pro Ala Thr His
 865 870 875 880
 Lys Pro Pro Ile Thr Asn Ser Ala Thr Gln Leu Lys Gly Pro His Arg
 885 890 895
 Pro Ile Gln Gly Gly Lys Val Gln Ala Ala Ala Ala Phe Leu Gln
 900 905 910

Arg Lys

<210> 84

<211> 203

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Reprolysin
(M12B) family zinc metalloprotease domain sequence

<400> 84

Lys Tyr Ile Glu Leu Val Ile Val Val Asp His Gly Met Tyr Thr Lys
 1 5 10 15

Tyr Gly Ser Asp Leu Asn Lys Ile Arg Gln Arg Val His Gln Ile Val
 20 25 30

Asn Leu Val Asn Glu Ile Tyr Arg Pro Gln Leu Asn Ile Arg Val Val
 Page 212

35 40 45
 Leu Val Gly Leu Glu Ile Trp Ser Asp Gly Asp Lys Ile Asn Val Gln
 50 55 60
 Ser Asp Ala Asn Asp Thr Leu His Ser Phe Gly Glu Trp Arg Glu Thr
 65 70 75 80
 Asp Leu Leu Lys Arg Lys Ser His Asp Asn Ala Gln Leu Leu Thr Gly
 85 90 95
 Ile Asp Phe Asp Gly Asn Thr Ile Gly Ala Ala Tyr Val Gly Gly Met
 100 105 110
 Cys Ser Pro Lys Arg Ser Val Gly Val Val Gln Asp His Ser Pro Ile
 115 120 125
 Val Leu Leu Val Ala Val Thr Met Ala His Glu Leu Gly His Asn Leu
 130 135 140
 Gly Met Thr His Asp Asp Lys Asn Lys Asp Gly Cys Thr Cys Glu Gly
 145 150 155 160
 Gly Gly Ser Cys Ile Met Asn Pro Val Ala Ser Ser Ser Pro Ser Lys
 165 170 175
 Lys Lys Phe Ser Asn Cys Ser Lys Asp Asp Tyr Gln Lys Phe Leu Thr
 180 185 190
 Lys Gln Lys Pro Gln Cys Leu Leu Asn Lys Pro
 195 200

<210> 85
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Pep_M12B_Propep (Reprolysin family propeptide)
 domain sequence

<400> 85
 His Leu Glu Lys Asn Arg Ser Leu Leu Ala Pro Asp Phe Thr Val Thr
 1 5 10 15
 Thr Tyr Asp Glu Asp Gly Thr Leu Val Thr Glu Glu Pro Leu Ile Gln
 20 25 30
 Asp Asp His Cys Tyr Tyr Gln Gly Tyr Val Glu Gly Tyr Pro Asn Ser
 35 40 45
 Ala Val Ser Leu Ser Thr Cys Ser Gly Gly Leu Arg Gly Ile Leu Gln
 50 55 60
 Leu Glu Asn Leu Ser Tyr Gly Ile Glu Pro Leu Glu Ser Ser Asp Gly
 65 70 75 80
 Phe Glu His Ile Ile Tyr Gln Ile Glu Asn Asp Lys Thr Glu Pro Ser
 85 90 95
 Pro Cys Gly Glu Cys Gly Ser Leu Ser Thr Ser Thr Asp Ser Ser Tyr

100 105 110
 Gly Ile Arg Ser Ala Ser Pro
 115
 <210> 86
 <211> 422
 <212> PRT
 <213> Homo sapiens
 <400> 86
 Met Phe Ser Asn Ser₅ Asp Glu Ala Val Ile₁₀ Asn Lys Lys Leu Pro₁₅ Lys
 1
 Glu Leu Leu₂₀ Arg Ile Phe Ser Phe₂₅ Leu Asp Val Val Thr Leu Cys
 30
 Arg Cys Ala₃₅ Gln Val Ser Arg Ala₄₀ Trp Asn Val Leu Ala₄₅ Leu Asp Gly
 Ser Asn₅₀ Trp Gln Arg Ile Asp₅₅ Leu Phe Asp Phe Gln₆₀ Arg Asp Ile Glu
 Gly Arg Val Val Glu Asn₇₀ Ile Ser Lys Arg Cys₇₅ Gly Gly Phe Leu Arg₈₀
 Lys Leu Ser Leu Arg₈₅ Gly Cys Leu Gly Val₉₀ Gly Asp Asn Ala Leu Arg₉₅
 Thr Phe Ala Gln₁₀₀ Asn Cys Arg Asn Ile₁₀₅ Glu Val Leu Asn Leu₁₁₀ Asn Gly
 Cys Thr Lys₁₁₅ Thr Thr Asp Ala Thr₁₂₀ Cys Thr Ser Leu Ser₁₂₅ Lys Phe Cys
 Ser Lys₁₃₀ Leu Arg His Leu Asp₁₃₅ Leu Ala Ser Cys Thr₁₄₀ Ser Ile Thr Asn
 Met Ser Leu Lys Ala Leu₁₅₀ Ser Glu Gly Cys Pro₁₅₅ Leu Leu Glu Gln Leu₁₆₀
 Asn Ile Ser Trp Cys₁₆₅ Asp Gln Val Thr Lys₁₇₀ Asp Gly Ile Gln Ala Leu₁₇₅
 Val Arg Gly Cys₁₈₀ Gly Gly Leu Lys Ala₁₈₅ Leu Phe Leu Lys Gly₁₉₀ Cys Thr
 Gln Leu Glu₁₉₅ Asp Glu Ala Leu Lys₂₀₀ Tyr Ile Gly Ala His₂₀₅ Cys Pro Glu
 Leu Val Thr Leu Asn Leu Gln₂₁₅ Thr Cys Leu Gln Ile Thr Asp Glu Gly
 210 220
 Leu Ile Thr Ile Cys Arg₂₃₀ Gly Cys His Lys Leu₂₃₅ Gln Ser Leu Cys Ala₂₄₀
 225
 Ser Gly Cys Ser Asn₂₄₅ Ile Thr Asp Ala Ile₂₅₀ Leu Asn Ala Leu Gly₂₅₅ Gln
 255
 Asn Cys Pro Arg₂₆₀ Leu Arg Ile Leu Glu Val Ala Arg Cys Ser₂₇₀ Gln Leu
 265

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Thr Asp Val Gly Phe Thr Thr Leu Ala Arg Asn Cys His Glu Leu Glu
 275 280 285
 Lys Met Asp Leu Glu Glu Cys Val Gln Ile Thr Asp Ser Thr Leu Ile
 290 295 300
 Gln Leu Ser Ile His Cys Pro Arg Leu Gln Val Leu Ser Leu Ser His
 305 310 315 320
 Cys Glu Leu Ile Thr Asp Asp Gly Ile Arg His Leu Gly Asn Gly Ala
 325 330 335
 Cys Ala His Asp Gln Leu Glu Val Ile Glu Leu Asp Asn Cys Pro Leu
 340 345 350
 Ile Thr Asp Ala Ser Leu Glu His Leu Lys Ser Cys His Ser Leu Glu
 355 360 365
 Arg Ile Glu Leu Tyr Asp Cys Gln Gln Ile Thr Arg Ala Gly Ile Lys
 370 375 380
 Arg Leu Arg Thr His Leu Pro Asn Ile Lys Val His Ala Tyr Phe Ala
 385 390 395 400
 Pro Val Thr Pro Pro Pro Ser Val Gly Gly Ser Arg Gln Arg Phe Cys
 405 410 415
 Arg Cys Cys Ile Ile Leu
 420

<210> 87
 <211> 422
 <212> PRT
 <213> Mus musculus

<400> 87
 Met Phe Ser Asn Ser Asp Glu Ala Val Ile Asn Lys Lys Leu Pro Lys
 1 5 10 15
 Glu Leu Leu Leu Arg Ile Phe Ser Phe Pro Asp Val Val Thr Leu Cys
 20 25 30
 Arg Cys Ala Gln Val Ser Arg Ala Trp Asn Val Leu Ala Leu Asp Gly
 35 40 45
 Ser Asn Trp Gln Arg Ile Asp Leu Phe Asp Phe Gln Arg Asp Ile Glu
 50 55 60
 Gly Arg Val Val Glu Asn Ile Ser Lys Arg Cys Gly Gly Phe Leu Arg
 65 70 75 80
 Lys Leu Ser Leu Arg Gly Cys Leu Gly Val Gly Asp Asn Ala Leu Arg
 85 90 95
 Thr Phe Ala Gln Asn Cys Arg Asn Ile Glu Val Leu Ser Leu Asn Gly
 100 105 110
 Cys Thr Lys Thr Thr Asp Ala Thr Cys Thr Ser Leu Ser Lys Phe Cys
 115 120 125
 Ser Lys Leu Arg His Leu Asp Leu Ala Ser Cys Thr Ser Ile Thr Asn
 130 135 140

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Met Ser Leu Lys Ala Leu Ser Glu Gly Cys Pro Leu Leu Glu Gln Leu
 145 150 155 160
 Asn Ile Ser Trp Cys Asp Gln Val Thr Lys Asp Gly Ile Gln Ala Leu
 165 170 175
 Val Arg Gly Cys Gly Gly Leu Lys Ala Leu Phe Leu Lys Gly Cys Thr
 180 185 190
 Gln Leu Glu Asp Glu Ala Leu Lys Tyr Ile Gly Ala His Cys Pro Glu
 195 200 205
 Leu Val Thr Leu Asn Leu Gln Thr Cys Leu Gln Ile Thr Asp Glu Gly
 210 215 220
 Leu Ile Thr Ile Cys Arg Gly Cys His Lys Leu Gln Ser Leu Cys Ala
 225 230 235 240
 Ser Gly Cys Ser Asn Ile Thr Asp Ala Ile Leu Asn Ala Leu Gly Gln
 245 250 255
 Asn Cys Pro Arg Leu Arg Ile Leu Glu Val Ala Arg Cys Ser Gln Leu
 260 265 270
 Thr Asp Val Gly Phe Thr Thr Leu Ala Arg Asn Cys His Glu Leu Glu
 275 280 285
 Lys Met Asp Leu Glu Glu Cys Val Gln Ile Thr Asp Ser Thr Leu Ile
 290 295 300
 Gln Leu Ser Ile His Cys Pro Arg Leu Gln Val Leu Ser Leu Ser His
 305 310 315 320
 Cys Glu Leu Ile Thr Asp Asp Gly Ile Arg His Leu Gly Asn Gly Ala
 325 330 335
 Cys Ala His Asp Gln Leu Glu Val Ile Glu Leu Asp Asn Cys Pro Leu
 340 345 350
 Ile Thr Asp Ala Ser Leu Glu His Leu Lys Ser Cys Pro Ser Phe Glu
 355 360 365
 Arg Ile Glu Leu Tyr Asp Cys Gln Gln Ile Thr Arg Ala Gly Ile Lys
 370 375 380
 Arg Leu Arg Thr His Leu Pro Asn Ile Lys Val His Ala Tyr Phe Ala
 385 390 395 400
 Pro Val Thr Pro Pro Pro Ser Val Gly Gly Ser Arg Gln Arg Phe Cys
 405 410 415
 Arg Cys Cys Ile Ile Leu
 420

<210> 88
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 88
 Met Val Phe Ser Asn Asn Asp Glu Gly Leu Ile Asn Lys Lys Leu Pro
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1	5	10	15												
Lys	Glu	Leu	Leu	Leu	Arg	Ile	Phe	Ser	Phe	Leu	Asp	Ile	Val	Thr	Leu
		20						25					30		
Cys	Arg	Cys	Ala	Gln	Ile	Ser	Lys	Ala	Trp	Asn	Ile	Leu	Ala	Leu	Asp
		35					40					45			
Gly	Ser	Asn	Trp	Gln	Arg	Ile	Asp	Leu	Phe	Asn	Phe	Gln	Thr	Asp	Val
	50					55					60				
Glu	Gly	Arg	Val	Val	Glu	Asn	Ile	Ser	Lys	Arg	Cys	Gly	Gly	Phe	Leu
65					70					75					80
Arg	Lys	Leu	Ser	Leu	Arg	Gly	Cys	Ile	Gly	Val	Gly	Asp	Ser	Ser	Leu
				85					90					95	
Lys	Thr	Phe	Ala	Gln	Asn	Cys	Arg	Asn	Ile	Glu	His	Leu	Asn	Leu	Asn
			100					105					110		
Gly	Cys	Thr	Lys	Ile	Thr	Asp	Ser	Thr	Cys	Tyr	Ser	Leu	Ser	Arg	Phe
		115					120					125			
Cys	Ser	Lys	Leu	Lys	His	Leu	Asp	Leu	Thr	Ser	Cys	Val	Ser	Ile	Thr
	130					135					140				
Asn	Ser	Ser	Leu	Lys	Gly	Ile	Ser	Glu	Gly	Cys	Arg	Asn	Leu	Glu	Tyr
145					150					155					160
Leu	Asn	Leu	Ser	Trp	Cys	Asp	Gln	Ile	Thr	Lys	Asp	Gly	Ile	Glu	Ala
				165					170					175	
Leu	Val	Arg	Gly	Cys	Arg	Gly	Leu	Lys	Ala	Leu	Leu	Leu	Arg	Gly	Cys
			180					185					190		
Thr	Gln	Leu	Glu	Asp	Glu	Ala	Leu	Lys	His	Ile	Gln	Asn	Tyr	Cys	His
		195					200					205			
Glu	Leu	Val	Ser	Leu	Asn	Leu	Gln	Ser	Cys	Ser	Arg	Ile	Thr	Asp	Glu
	210					215					220				
Gly	Val	Val	Gln	Ile	Cys	Arg	Gly	Cys	His	Arg	Leu	Gln	Ala	Leu	Cys
225					230					235					240
Leu	Ser	Gly	Cys	Ser	Asn	Leu	Thr	Asp	Ala	Ser	Leu	Thr	Ala	Leu	Gly
				245					250					255	
Leu	Asn	Cys	Pro	Arg	Leu	Gln	Ile	Leu	Glu	Ala	Ala	Arg	Cys	Ser	His
			260					265					270		
Leu	Thr	Asp	Ala	Gly	Phe	Thr	Leu	Leu	Ala	Arg	Asn	Cys	His	Glu	Leu
		275					280					285			
Glu	Lys	Met	Asp	Leu	Glu	Glu	Cys	Ile	Leu	Ile	Thr	Asp	Ser	Thr	Leu
	290					295					300				
Ile	Gln	Leu	Ser	Ile	His	Cys	Pro	Lys	Leu	Gln	Ala	Leu	Ser	Leu	Ser
305					310					315					320
His	Cys	Glu	Leu	Ile	Thr	Asp	Asp	Gly	Ile	Leu	His	Leu	Ser	Asn	Ser
				325					330					335	
Thr	Cys	Gly	His	Glu	Arg	Leu	Arg	Val	Leu	Glu	Leu	Asp	Asn	Cys	Leu

340 345 350
 Leu Ile Thr Asp Val Ala Leu Glu His Leu Glu Asn Cys Arg Gly Leu
 355 360 365
 Glu Arg Leu Glu Leu Tyr Asp Cys Gln Gln Val Thr Arg Ala Gly Ile
 370 375 380
 Lys Arg Met Arg Ala Gln Leu Pro His Val Lys Val His Ala Tyr Phe
 385 390 395 400
 Ala Pro Val Thr Pro Pro Thr Ala Val Ala Gly Ser Gly Gln Arg Leu
 405 410 415
 Cys Arg Cys Cys Val Ile Leu
 420

<210> 89
 <211> 425
 <212> PRT
 <213> Homo sapiens

<400> 89
 Ser Ala Met Val Phe Ser Asn Asn Asp Glu Gly Leu Ile Asn Lys Lys
 1 5 10 15
 Leu Pro Lys Glu Leu Leu Leu Arg Ile Phe Ser Phe Leu Asp Ile Val
 20 25 30
 Thr Leu Cys Arg Cys Ala Gln Ile Ser Lys Ala Trp Asn Ile Leu Ala
 35 40 45
 Leu Asp Gly Ser Asn Trp Gln Arg Ile Asp Leu Phe Asn Phe Gln Ile
 50 55 60
 Asp Val Glu Gly Arg Val Val Glu Asn Ile Ser Lys Arg Cys Gly Gly
 65 70 75 80
 Phe Leu Arg Lys Leu Ser Leu Arg Gly Cys Ile Gly Val Gly Asp Ser
 85 90 95
 Ser Leu Lys Thr Phe Ala Gln Asn Cys Arg Asn Ile Glu His Leu Asn
 100 105 110
 Leu Asn Gly Cys Thr Lys Ile Thr Asp Ser Thr Cys Tyr Ser Leu Ser
 115 120 125
 Arg Phe Cys Ser Lys Leu Lys His Leu Asp Leu Thr Ser Cys Val Ser
 130 135 140
 Ile Thr Asn Ser Ser Leu Lys Gly Ile Ser Glu Gly Cys Arg Asn Leu
 145 150 155 160
 Glu Tyr Leu Asn Leu Ser Trp Cys Asp Gln Ile Thr Lys Asp Gly Ile
 165 170 175
 Glu Ala Leu Val Arg Gly Cys Arg Gly Leu Lys Ala Leu Leu Leu Arg
 180 185 190
 Gly Cys Thr Gln Leu Glu Asp Glu Ala Leu Lys His Ile Gln Asn Tyr
 195 200 205

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Cys His Glu Leu Val Ser Leu Asn Leu Gln Ser Cys Ser Arg Ile Thr
 210 215 220
 Asp Glu Gly Val Val Gln Ile Cys Arg Gly Cys His Arg Leu Gln Ala
 225 230 235 240
 Leu Cys Leu Ser Gly Cys Ser Asn Leu Thr Asp Ala Ser Leu Thr Ala
 245 250 255
 Leu Gly Leu Asn Cys Pro Arg Leu Gln Ile Leu Glu Ala Ala Arg Cys
 260 265 270
 Ser His Leu Thr Asp Ala Gly Phe Thr Leu Leu Ala Arg Asn Cys His
 275 280 285
 Glu Leu Glu Lys Met Asp Leu Glu Glu Cys Ile Leu Ile Thr Asp Ser
 290 295 300
 Thr Leu Ile Gln Leu Ser Ile His Cys Pro Lys Leu Gln Ala Leu Ser
 305 310 315 320
 Leu Ser His Cys Glu Leu Ile Thr Asp Asp Gly Ile Leu His Leu Ser
 325 330 335
 Asn Ser Thr Cys Gly His Glu Arg Leu Arg Val Leu Glu Leu Asp Asn
 340 345 350
 Cys Leu Leu Ile Thr Asp Val Ala Leu Glu His Leu Glu Asn Cys Arg
 355 360 365
 Gly Leu Glu Arg Leu Glu Leu Tyr Asp Cys Gln Gln Val Thr Arg Ala
 370 375 380
 Gly Ile Lys Arg Met Arg Ala Gln Leu Pro His Val Lys Val His Ala
 385 390 395 400
 Tyr Phe Ala Pro Val Thr Pro Pro Thr Ala Val Ala Gly Ser Gly Gln
 405 410 415
 Arg Leu Cys Arg Cys Cys Val Ile Leu
 420 425

<210> 90
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 90
 Met Val Phe Ser Asn Asn Asp Glu Gly Leu Ile Asn Lys Lys Leu Pro
 1 5 10 15
 Lys Glu Leu Leu Leu Arg Ile Phe Ser Phe Leu Asp Ile Val Thr Leu
 20 25 30
 Cys Arg Cys Ala Gln Ile Ser Lys Ala Trp Asn Ile Leu Ala Leu Asp
 35 40 45
 Gly Ser Asn Trp Gln Arg Ile Asp Leu Phe Asn Phe Gln Thr Asp Val
 50 55 60
 Glu Gly Arg Val Val Glu Asn Ile Ser Lys Arg Cys Gly Gly Phe Leu
 65 70 75 80

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Lys Lys Leu Ser Leu Arg Gly Cys Ile Gly Val Gly Asp Ser Ser Leu
 85 90 95
 Lys Thr Phe Ala Gln Asn Cys Arg Asn Ile Glu His Leu Asn Leu Asn
 100 105 110
 Gly Cys Thr Lys Ile Thr Asp Ser Thr Cys Tyr Ser Leu Ser Arg Phe
 115 120 125
 Cys Ser Lys Leu Lys His Leu Asp Leu Thr Ser Cys Val Ser Ile Thr
 130 135 140
 Asn Ser Ser Leu Lys Gly Ile Ser Glu Gly Cys Arg Asn Leu Glu Tyr
 145 150 155 160
 Leu Asn Leu Ser Trp Cys Asp Gln Ile Thr Lys Asp Gly Ile Glu Ala
 165 170 175
 Leu Val Arg Gly Cys Arg Gly Leu Lys Ala Leu Leu Leu Arg Gly Cys
 180 185 190
 Thr Gln Leu Glu Asp Glu Ala Leu Lys His Ile Gln Asn Tyr Cys His
 195 200 205
 Glu Leu Val Ser Leu Asn Leu Gln Ser Cys Ser Arg Ile Thr Asp Glu
 210 215 220
 Gly Val Val Gln Ile Cys Arg Gly Cys His Arg Leu Gln Ala Leu Cys
 225 230 235 240
 Leu Ser Gly Cys Ser Asn Leu Thr Asp Ala Ser Leu Thr Ala Leu Gly
 245 250 255
 Leu Asn Cys Pro Arg Leu Gln Ile Leu Glu Ala Ala Arg Cys Ser His
 260 265 270
 Leu Thr Asp Ala Gly Phe Thr Leu Leu Ala Arg Asn Cys His Glu Leu
 275 280 285
 Glu Lys Met Asp Leu Glu Glu Cys Ile Leu Ile Thr Asp Ser Thr Leu
 290 295 300
 Ile Gln Leu Ser Ile His Cys Pro Lys Leu Gln Ala Leu Ser Leu Ser
 305 310 315 320
 His Cys Glu Leu Ile Thr Asp Asp Gly Ile Leu His Leu Ser Asn Ser
 325 330 335
 Thr Cys Gly His Glu Arg Leu Arg Val Leu Glu Leu Asp Asn Cys Leu
 340 345 350
 Leu Ile Thr Asp Val Ala Leu Glu His Leu Glu Asn Cys Arg Gly Leu
 355 360 365
 Glu Arg Leu Glu Leu Tyr Asp Cys Gln Gln Val Thr Arg Ala Gly Ile
 370 375 380
 Lys Arg Met Arg Ala Gln Leu Pro His Val Lys Val His Ala Tyr Phe
 385 390 395 400
 Ala Pro Val Thr Pro Pro Thr Ala Val Ala Gly Ser Gly Gln Arg Leu
 405 410 415

Cys Arg Cys Cys Val Ile Leu
420

<210> 91
<211> 46
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: F-box domain
sequence

<400> 91
Phe Ser Leu Leu Arg Leu Pro Asp Asp Leu Leu Glu Lys Ile Leu Ser
1 5 10 15
Arg Leu Pro Leu Lys Asp Leu Leu Ser Leu Ser Lys Val Ser Lys Lys
20 25 30
Phe Arg Ser Leu Val Asp Ser Leu Leu Asp Val Lys Leu Leu
35 40 45

<210> 92
<211> 172
<212> PRT
<213> Homo sapiens

<400> 92
Met Val Gly Pro Ala Pro Arg Arg Arg Leu Arg Pro Leu Ala Ala Leu
1 5 10 15
Ala Leu Val Leu Ala Leu Ala Pro Gly Leu Pro Thr Ala Arg Ala Gly
20 25 30
Gln Thr Pro Arg Pro Ala Glu Arg Gly Pro Pro Val Arg Leu Phe Thr
35 40 45
Glu Glu Glu Leu Ala Arg Tyr Gly Gly Glu Glu Glu Asp Gln Pro Ile
50 55 60
Tyr Leu Ala Val Lys Gly Val Val Phe Asp Val Thr Ser Gly Lys Glu
65 70 75 80
Phe Tyr Gly Arg Gly Ala Pro Tyr Asn Ala Leu Thr Gly Lys Asp Ser
85 90 95
Thr Arg Gly Val Ala Lys Met Ser Leu Asp Pro Ala Asp Leu Thr His
100 105 110
Asp Thr Thr Gly Leu Thr Ala Lys Glu Leu Glu Ala Leu Asp Glu Val
115 120 125
Phe Thr Lys Val Tyr Lys Ala Lys Tyr Pro Ile Val Gly Tyr Thr Ala
130 135 140
Arg Arg Ile Leu Asn Glu Asp Gly Ser Pro Asn Leu Asp Phe Lys Pro
145 150 155 160
Glu Asp Gln Pro His Phe Asp Ile Lys Asp Glu Phe
165 170

<210> 93
 <211> 171
 <212> PRT
 <213> Mus musculus

<400> 93
 Met Ala Arg Pro Ala Pro Trp Trp Arg Leu Arg Leu Leu Ala Ala Leu
 1 5 10 15
 Val Leu Ala Leu Ala Leu Val Pro Val Pro Ser Ala Trp Ala Gly Gln
 20 25 30
 Thr Pro Arg Pro Ala Glu Arg Gly Pro Pro Val Arg Leu Phe Thr Glu
 35 40 45
 Glu Glu Leu Ala Arg Tyr Gly Gly Glu Glu Glu Asp Gln Pro Ile Tyr
 50 55 60
 Leu Ala Val Lys Gly Val Val Phe Asp Val Thr Ser Gly Lys Glu Phe
 65 70 75 80
 Tyr Gly Arg Gly Ala Pro Tyr Asn Ala Leu Ala Gly Lys Asp Ser Ser
 85 90 95
 Arg Gly Val Ala Lys Met Ser Leu Asp Pro Ala Asp Leu Thr His Asp
 100 105 110
 Thr Thr Gly Leu Thr Ala Lys Glu Leu Glu Ala Leu Asp Asp Val Phe
 115 120 125
 Ser Lys Val Tyr Lys Ala Lys Tyr Pro Ile Val Gly Tyr Thr Ala Arg
 130 135 140
 Arg Ile Leu Asn Glu Asp Gly Ser Pro Asn Leu Asp Phe Lys Pro Glu
 145 150 155 160
 Asp Gln Pro His Phe Asp Ile Lys Asp Glu Phe
 165 170

<210> 94
 <211> 100
 <212> PRT
 <213> Arabidopsis thaliana

<400> 94
 Met Glu Phe Thr Ala Glu Gln Leu Ser Gln Tyr Asn Gly Thr Asp Glu
 1 5 10 15
 Ser Lys Pro Ile Tyr Val Ala Ile Lys Gly Arg Val Phe Asp Val Thr
 20 25 30
 Thr Gly Lys Ser Phe Tyr Gly Ser Gly Gly Asp Tyr Ser Met Phe Ala
 35 40 45
 Gly Lys Asp Ala Ser Arg Ala Leu Gly Lys Met Ser Lys Asn Glu Glu
 50 55 60
 Asp Val Ser Pro Ser Leu Glu Gly Leu Thr Glu Lys Glu Ile Asn Thr
 65 70 75 80

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Leu Asn Asp Trp Glu Thr Lys Phe Glu Ala Lys Tyr Pro Val Val Gly
 85 90 95
 Arg Val Val Ser
 100

<210> 95
 <211> 232
 <212> PRT
 <213> Oryza sativa

<400> 95
 Met Ala Ala Ala Val Ala Glu Leu Trp Glu Thr Leu Lys Gln Ala Ile
 1 5 10 15
 Val Ala Tyr Thr Gly Leu Ser Pro Ala Ala Phe Phe Thr Ala Val Ala
 20 25 30
 Ala Ala Ala Ala Leu Tyr His Val Val Ser Gly Ile Phe Ala Gly Pro
 35 40 45
 Pro Pro Pro Pro Pro Pro Arg Pro Arg Asp Glu Pro Glu Ala Glu Pro
 50 55 60
 Leu Pro Pro Pro Val Gln Leu Gly Glu Val Ser Glu Glu Glu Leu Arg
 65 70 75 80
 Gln Tyr Asp Gly Ser Asp Pro Lys Lys Pro Leu Leu Met Ala Ile Lys
 85 90 95
 Gly Gln Ile Tyr Asp Val Thr Gln Ser Arg Met Phe Tyr Gly Pro Gly
 100 105 110
 Gly Pro Tyr Ala Leu Phe Ala Gly Lys Asp Ala Ser Arg Ala Leu Ala
 115 120 125
 Lys Met Ser Phe Glu Pro Gln Asp Leu Thr Gly Asp Ile Ser Gly Leu
 130 135 140
 Gly Pro Phe Glu Leu Asp Ala Leu Gln Asp Trp Glu Tyr Lys Phe Met
 145 150 155 160
 Gly Lys Tyr Val Lys Val Gly Thr Val Lys Lys Thr Val Pro Val Glu
 165 170 175
 Asp Gly Ala Pro Ser Thr Ser Pro Glu Thr Thr Glu Thr Ala Ala Ala
 180 185 190
 Ala Glu Pro Glu Lys Ala Pro Ala Thr Glu Glu Lys Pro Arg Glu Val
 195 200 205
 Ser Ser Glu Glu Val Lys Glu Lys Glu Asp Ala Val Ala Ala Ala Ala
 210 215 220
 Pro Asp Glu Gly Ala Lys Glu Ser
 225 230

<210> 96
 <211> 104
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Steroid
binding domain sequence

<400> 96

Asp Phe Thr Pro Glu Glu Leu Arg Lys Tyr Asp Gly Ser Asp Glu Asp
 1 5 10 15
 Lys Pro Ile Tyr Leu Ala Ile Lys Gly Lys Val Tyr Asp Val Thr Arg
 20 25 30
 Gly Arg Lys Phe Tyr Gly Pro Gly Gly Pro Tyr Ser Leu Phe Ala Gly
 35 40 45
 Arg Asp Ala Ser Arg Ala Leu Ala Thr Met Ser Phe Asp Glu Glu Asp
 50 55 60
 Leu Lys Asp Ser Asp Glu Glu Ile Asp Asp Leu Ser Asp Leu Ser Ala
 65 70 75 80
 Asp Glu Leu Glu Ala Leu Arg Glu Trp Glu Thr Lys Phe Lys Ala Lys
 85 90 95
 Tyr Pro Val Val Gly Arg Leu Ile
 100

<210> 97

<211> 309

<212> PRT

<213> Homo sapiens

<400> 97

Met Glu Ala Leu Ala Leu Val Gly Ala Trp Tyr Thr Ala Arg Lys Ser
 1 5 10 15
 Ile Thr Val Ile Cys Asp Phe Tyr Ser Leu Ile Arg Leu His Phe Ile
 20 25 30
 Pro Arg Leu Gly Ser Arg Ala Asp Leu Ile Lys Gln Tyr Gly Arg Trp
 35 40 45
 Ala Val Val Ser Gly Ala Thr Asp Gly Ile Gly Lys Ala Tyr Ala Glu
 50 55 60
 Glu Leu Ala Ser Arg Gly Leu Asn Ile Ile Leu Ile Ser Arg Asn Glu
 65 70 75 80
 Glu Lys Leu Gln Val Val Ala Lys Asp Ile Ala Asp Thr Tyr Lys Val
 85 90 95
 Glu Thr Asp Ile Ile Val Ala Asp Phe Ser Ser Gly Arg Glu Ile Tyr
 100 105 110
 Leu Pro Ile Arg Glu Ala Leu Lys Asp Lys Asp Val Gly Ile Leu Val
 115 120 125
 Asn Asn Val Gly Val Phe Tyr Pro Tyr Pro Gln Tyr Phe Thr Gln Leu
 130 135 140
 Ser Glu Asp Lys Leu Trp Asp Ile Ile Asn Val Asn Ile Ala Ala Ala
 145 150 155 160

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Ser Leu Met Val His Val Val Leu Pro Gly Met Val Glu Arg Lys Lys
 165 170 175
 Gly Ala Ile Val Thr Ile Ser Ser Gly Ser Cys Cys Lys Pro Thr Pro
 180 185 190
 Gln Leu Ala Ala Phe Ser Ala Ser Lys Ala Tyr Leu Asp His Phe Ser
 195 200 205
 Arg Ala Leu Gln Tyr Glu Tyr Ala Ser Lys Gly Ile Phe Val Gln Ser
 210 215 220
 Leu Ile Pro Phe Tyr Val Ala Thr Ser Met Thr Ala Pro Ser Asn Phe
 225 230 235 240
 Leu His Arg Cys Ser Trp Leu Val Pro Ser Pro Lys Val Tyr Ala His
 245 250 255
 His Ala Val Ser Thr Leu Gly Ile Ser Lys Arg Thr Thr Gly Tyr Trp
 260 265 270
 Ser His Ser Ile Gln Phe Leu Phe Ala Gln Tyr Met Pro Glu Trp Leu
 275 280 285
 Trp Val Trp Gly Ala Asn Ile Leu Asn Arg Ser Leu Arg Lys Glu Ala
 290 295 300
 Leu Ser Cys Thr Ala
 305

<210> 98
 <211> 339
 <212> PRT
 <213> *Drosophila melanogaster*

<400> 98
 Met Gln Pro Val Leu Glu Val Ser Ile Tyr Thr Leu Leu Lys Met Ala
 1 5 10 15
 Phe Ile Trp Gln Leu Ile Ser Ala Ala Ile Tyr Leu Val Gly Leu Leu
 20 25 30
 Thr Ile Gly Val Phe Leu Tyr Asp Asn Leu Lys Ser Leu Val Ser Ile
 35 40 45
 Ile Lys Ala Val Leu Glu Pro Tyr Phe Gln Pro His Leu Pro Arg Thr
 50 55 60
 Leu Val Asp Lys Phe Gly Gln Trp Ala Val Val Thr Gly Ala Thr Asp
 65 70 75 80
 Gly Ile Gly Lys Glu Tyr Ala Arg Glu Leu Ala Arg Gln Gly Ile Asn
 85 90 95
 Leu Val Leu Ile Ser Arg Thr Lys Glu Lys Leu Ile Ala Val Thr Asn
 100 105 110
 Glu Ile Glu Ser Gln Tyr Lys Val Lys Thr Lys Trp Ile Ala Ala Asp
 115 120 125
 Phe Ala Lys Gly Arg Glu Val Tyr Asp Gln Ile Glu Lys Glu Leu Ala
 Page 225

130 135 140
 Gly Ile Asp Val Gly Ile Leu Val Asn Asn Val Gly Met Met Tyr Glu
 145 150 155 160
 His Pro Glu Ser Leu Asp Leu Val Ser Glu Asp Leu Leu Trp Asn Leu
 165 170 175
 Leu Thr Val Asn Met Gly Ser Val Thr Met Leu Thr Arg Lys Ile Leu
 180 185 190
 Pro Gln Met Ile Gly Arg Arg Lys Gly Ala Ile Val Asn Leu Gly Ser
 195 200 205
 Ser Ser Glu Leu Gln Pro Leu Pro Asn Met Thr Val Tyr Ala Ala Ser
 210 215 220
 Lys Lys Phe Val Thr Tyr Phe Ser Lys Ala Leu Glu Leu Glu Val Ala
 225 230 235 240
 Glu His Asn Ile His Val Gln Leu Val Met Pro Asn Phe Val Val Thr
 245 250 255
 Lys Met Asn Ala Tyr Thr Asp Arg Val Met Gln Gly Gly Leu Phe Phe
 260 265 270
 Pro Asn Ala Tyr Thr Phe Ala Arg Ser Ala Val Phe Thr Leu Gly Lys
 275 280 285
 Thr Ser Glu Thr Asn Gly Phe Trp Thr His Gly Ile Gln Tyr Ala Ile
 290 295 300
 Met Lys Leu Ala Pro Leu Pro Ile Arg Thr Tyr Leu Gly His Gln Leu
 305 310 315 320
 Phe Lys Arg Leu Arg Ile Glu Ala Leu Glu Gln Lys Gln Lys Lys Leu
 325 330 335
 Lys Leu Thr

<210> 99
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 99
 Met Glu Ser Ala Leu Pro Ala Ala Gly Phe Leu Tyr Trp Val Gly Ala
 1 5 10 15
 Gly Thr Val Ala Tyr Leu Ala Leu Arg Ile Ser Tyr Ser Leu Phe Thr
 20 25 30
 Ala Leu Arg Val Trp Gly Val Gly Asn Glu Ala Gly Val Gly Pro Gly
 35 40 45
 Leu Gly Glu Trp Ala Val Val Thr Gly Ser Thr Asp Gly Ile Gly Lys
 50 55 60
 Ser Tyr Ala Glu Glu Leu Ala Lys His Gly Met Lys Val Val Leu Ile
 65 70 75 80

Ser Arg Ser Lys Asp₈₅ Lys Leu Asp Gln Val₉₀ Ser Ser Glu Ile Lys₉₅ Glu
 Lys Phe Lys Val₁₀₀ Glu Thr Arg Thr Ile₁₀₅ Ala Val Asp Phe Ala₁₁₀ Ser Glu
 Asp Ile Tyr₁₁₅ Asp Lys Ile Lys Thr₁₂₀ Gly Leu Ala Gly Leu₁₂₅ Glu Ile Gly
 Ile Leu Val Asn Asn Val Gly₁₃₅ Met Ser Tyr Glu Tyr₁₄₀ Pro Glu Tyr Phe
 Leu₁₄₅ Asp Val Pro Asp Leu₁₅₀ Asp Asn Val Ile Lys₁₅₅ Lys Met Ile Asn Ile₁₆₀
 Asn Ile Leu Ser Val₁₆₅ Cys Lys Met Thr Gln₁₇₀ Leu Val Leu Pro Gly₁₇₅ Met
 Val Glu Arg Ser₁₈₀ Lys Gly Ala Ile Leu₁₈₅ Asn Ile Ser Ser Gly₁₉₀ Ser Gly
 Met Leu Pro₁₉₅ Val Pro Leu Leu Thr₂₀₀ Ile Tyr Ser Ala Thr₂₀₅ Lys Thr Phe
 Val Asp₂₁₀ Phe Phe Ser Gln Cys₂₁₅ Leu His Glu Glu Tyr₂₂₀ Arg Ser Lys Gly
 Val₂₂₅ Phe Val Gln Ser Val₂₃₀ Leu Pro Tyr Phe Val₂₃₅ Ala Thr Lys Leu Ala₂₄₀
 Lys Ile Arg Lys Pro₂₄₅ Thr Leu Asp Lys Pro₂₅₀ Ser Pro Glu Thr Phe₂₅₅ Val
 Lys Ser Ala Ile₂₆₀ Lys Thr Val Gly Leu₂₆₅ Gln Ser Arg Thr Asn Gly Tyr
 Leu Ile His₂₇₅ Ala Leu Met Gly Ser₂₈₀ Ile Ile Ser Asn Leu₂₈₅ Pro Ser Trp
 Ile Tyr₂₉₀ Leu Lys Ile Val Met₂₉₅ Asn Met Asn Lys Ser₃₀₀ Thr Arg Ala His
 Tyr₃₀₅ Leu Lys Lys Thr Lys₃₁₀ Lys Asn

<210> 100

<211> 312

<212> PRT

<213> Anas platyrhynchos

<400> 100

Met₁ Leu Pro Ala Ala₅ Gly Leu Leu Trp Trp₁₀ Val Gly Ala Leu Gly₁₅ Ala
 Leu Tyr Ala Ala₂₀ Val Arg Gly Ala Leu₂₅ Gly Leu Leu Gly Ala₃₀ Leu Arg
 Val Trp Gly₃₅ Ile Gly Ala Gly Arg₄₀ Ala Ala Leu Gly Pro₄₅ Gly Leu Gly
 Ala Trp Ala Val Val Thr Gly₅₅ Ala Thr Asp Gly Ile₆₀ Gly Lys Ala Tyr

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Ala Lys Glu Leu Ala Lys Arg Gly Met Lys Val Ala Leu Ile Ser Arg
 65 70 75 80
 Ser Lys Glu Lys Leu Asp Gln Val Ala Gly Glu Ile Thr Glu Gln Tyr
 85 90 95
 Gly Val Glu Thr Lys Val Ile Val Ala Asp Phe Gly Glu Arg Glu Asp
 100 105 110
 Ile Tyr Asp Arg Ile Arg Ala Gly Leu Glu Gly Leu Glu Ile Gly Val
 115 120 125
 Leu Val Asn Asn Val Gly Ile Ser Tyr Ser Tyr Pro Glu Tyr Phe Ile
 130 135 140
 Asp Val Pro Asp Leu Asp Lys Thr Ile Asp Lys Met Ile Asn Ile Asn
 145 150 155 160
 Ile Met Ser Val Cys Lys Met Thr Arg Leu Val Leu Pro Gly Met Leu
 165 170 175
 Glu Arg Ser Lys Gly Val Ile Leu Asn Ile Ser Ser Ala Ala Gly Met
 180 185 190
 Tyr Pro Thr Pro Leu Leu Thr Leu Tyr Ser Ala Ser Lys Ala Phe Val
 195 200 205
 Asp Tyr Phe Ser Arg Gly Leu His Ala Glu Tyr Lys Ser Lys Gly Ile
 210 215 220
 Ile Val Gln Ser Val Met Pro Tyr Tyr Val Ala Thr Lys Met Ser Lys
 225 230 235 240
 Ile Ser Lys Pro Ser Phe Asp Lys Pro Thr Pro Glu Thr Tyr Val Arg
 245 250 255
 Ala Ala Ile Gly Thr Val Gly Leu Gln Ser Gln Thr Asn Gly Cys Leu
 260 265 270
 Pro His Ala Phe Met Gly Trp Val Phe Ser Ile Leu Pro Thr Ser Thr
 275 280 285
 Val Met Asn Leu Leu Met Lys Thr Asn Lys Gln Ile Arg Ala Arg Phe
 290 295 300
 Leu Lys Lys Lys Met Lys Glu Lys
 305 310

<210> 101
 <211> 312
 <212> PRT
 <213> Mus musculus

<400> 101
 Met Glu Cys Ala Pro Pro Ala Ala Gly Phe Leu Tyr Trp Val Gly Ala
 1 5 10 15
 Ser Thr Ile Ala Tyr Leu Ala Leu Arg Ala Ser Tyr Ser Leu Phe Arg
 20 25 30
 Ala Phe Gln Val Trp Cys Val Gly Asn Glu Ala Leu Val Gly Pro Arg
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35 40 45
 Leu Gly Glu Trp Ala Val Val Thr Gly Gly Thr Asp Gly Ile Gly Lys
 50 55 60
 Ala Tyr Ala Glu Glu Leu Ala Lys Arg Gly Met Lys Ile Val Leu Ile
 65 70 75 80
 Ser Arg Ser Gln Asp Lys Leu Asn Gln Val Ser Asn Asn Ile Lys Glu
 85 90 95
 Lys Phe Asn Val Glu Thr Arg Thr Ile Ala Val Asp Phe Ser Leu Asp
 100 105 110
 Asp Ile Tyr Asp Lys Ile Lys Thr Gly Leu Ser Gly Leu Glu Ile Gly
 115 120 125
 Val Leu Val Asn Asn Val Gly Met Ser Tyr Glu Tyr Pro Glu Tyr Phe
 130 135 140
 Leu Glu Ile Pro Asp Leu Asp Asn Thr Ile Lys Lys Leu Ile Asn Ile
 145 150 155 160
 Asn Val Leu Ser Val Cys Lys Val Thr Arg Leu Val Leu Pro Gly Met
 165 170 175
 Val Glu Arg Ser Lys Gly Val Ile Leu Asn Ile Ser Ser Ala Ser Gly
 180 185 190
 Met Leu Pro Val Pro Leu Leu Thr Ile Tyr Ser Ala Thr Lys Ala Phe
 195 200 205
 Val Asp Phe Phe Ser Gln Cys Leu His Glu Glu Tyr Lys Ser Lys Gly
 210 215 220
 Ile Phe Val Gln Ser Val Met Pro Tyr Leu Val Ala Thr Lys Leu Ala
 225 230 235 240
 Lys Ile Gln Lys Pro Thr Leu Asp Lys Pro Ser Ala Glu Thr Phe Val
 245 250 255
 Lys Ser Ala Ile Lys Thr Val Gly Leu Gln Thr Arg Thr Thr Gly Tyr
 260 265 270
 Val Ile His Ser Leu Met Gly Ser Ile Asn Ser Ile Met Pro Arg Trp
 275 280 285
 Met Tyr Phe Lys Ile Ile Met Gly Phe Ser Lys Ser Leu Arg Asn Arg
 290 295 300
 Tyr Leu Lys Lys Arg Lys Lys Asn
 305 310

<210> 102
 <211> 271
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Short Chain
 Alcohol Dehydrogenase (adh_short) domain sequence

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<400> 102
 Thr Gly Lys Val Ala Leu Val Thr Gly Ala Ser Ser Gly Ile Gly Leu
 1 5 10 15
 Ala Ile Ala Lys Arg Leu Ala Lys Glu Gly Ala Lys Val Val Val Val
 20 25 30
 Asp Arg Arg Glu Glu Lys Ala Glu Gln Val Ala Ala Glu Leu Lys Ala
 35 40 45
 Glu Leu Gly Asp Arg Ala Leu Phe Ile Gln Leu Asp Val Thr Asp Glu
 50 55 60
 Glu Gln Val Lys Ala Ala Val Ala Gln Ala Val Glu Arg Leu Gly Asp
 65 70 75 80
 Arg Leu Asp Val Leu Val Asn Asn Ala Gly Ile Leu Gly Pro Gly Pro
 85 90 95
 Pro Phe Glu Glu Leu Ser Glu Glu Asp Trp Glu Arg Val Ile Asp Val
 100 105 110
 Asn Leu Thr Gly Val Phe Leu Leu Thr Gln Ala Val Leu Pro Ala Met
 115 120 125
 Asp His Met Leu Lys Arg Lys Gly Gly Arg Ile Val Asn Ile Ser Ser
 130 135 140
 Val Ala Gly Leu Asn Val Gly Val Pro Gly Leu Ser Ala Tyr Ser Ala
 145 150 155 160
 Ser Lys Ala Ala Val Ile Gly Leu Thr Arg Ser Leu Ala Leu Glu Leu
 165 170 175
 Ala Pro His Gly Thr Gly Ile Arg Val Asn Ala Val Ala Pro Gly Gly
 180 185 190
 Val Asp Thr Asp Met Thr Lys Ala Leu Arg Ser Arg Leu Ile Glu Ala
 195 200 205
 Lys Lys Lys Val Arg Glu Val Ala Asp Ile Ala Asp Pro Glu Leu Glu
 210 215 220
 Glu Arg Ile Thr Ser Thr Ile Thr Pro Leu Gly Arg Tyr Gly Val Thr
 225 230 235 240
 Pro Glu Glu Ile Ala Asn Ala Val Leu Phe Leu Ala Ser Asp Gly Ala
 245 250 255
 Ser Tyr Ser Val Thr Gly Gln Thr Leu Asn Val Asp Gly Gly Leu
 260 265 270

<210> 103
 <211> 1961
 <212> PRT
 <213> Homo sapiens

<400> 103
 Met Ala Gln Gln Ala Ala Asp Lys Tyr Leu Tyr Val Asp Lys Asn Phe
 1 5 10 15
 Ile Asn Asn Pro Leu Ala Gln Ala Asp Trp Ala Ala Lys Lys Leu Val
 Page 230

20					25					30					
Trp	Val	Pro	Ser	Asp	Lys	Ser	Gly	Phe	Glu	Pro	Ala	Ser	Leu	Lys	Glu
		35					40					45			
Glu	Val	Gly	Glu	Arg	Gly	His	Val	Glu	Leu	Val	Glu	Asn	Gly	Lys	Lys
	50					55					60				
Val	Lys	Val	Asn	Lys	Asp	Asp	Ile	Gln	Lys	Met	Asn	Pro	Pro	Lys	Phe
	65				70					75					80
Ser	Lys	Val	Glu	Asp	Met	Ala	Glu	Leu	Thr	Cys	Leu	Asn	Glu	Ala	Ser
				85					90					95	
Val	Leu	His	Asn	Leu	Lys	Glu	Arg	Tyr	Tyr	Ser	Gly	Leu	Ile	Tyr	Thr
			100					105					110		
Tyr	Ser	Gly	Leu	Phe	Cys	Val	Val	Ile	Asn	Pro	Tyr	Lys	Asn	Leu	Pro
		115					120					125			
Ile	Tyr	Ser	Glu	Glu	Ile	Val	Glu	Met	Tyr	Lys	Gly	Lys	Lys	Arg	His
	130					135					140				
Glu	Met	Pro	Pro	His	Ile	Tyr	Ala	Ile	Thr	Asp	Thr	Ala	Tyr	Arg	Ser
	145				150					155					160
Met	Met	Gln	Asp	Arg	Glu	Asp	Gln	Ser	Ile	Leu	Cys	Thr	Gly	Glu	Ser
				165					170					175	
Gly	Ala	Gly	Lys	Thr	Glu	Asn	Thr	Lys	Lys	Val	Ile	Gln	Tyr	Leu	Ala
			180					185					190		
Tyr	Val	Ala	Ser	Ser	His	Lys	Ser	Lys	Lys	Asp	Gln	Gly	Glu	Leu	Glu
		195					200					205			
Arg	Gln	Leu	Leu	Gln	Ala	Asn	Pro	Ile	Leu	Glu	Ala	Phe	Gly	Asn	Ala
	210					215					220				
Lys	Thr	Val	Lys	Asn	Asp	Asn	Ser	Ser	Arg	Phe	Gly	Lys	Phe	Ile	Arg
	225				230					235					240
Ile	Asn	Phe	Asp	Val	Asn	Gly	Tyr	Ile	Val	Gly	Ala	Asn	Ile	Glu	Thr
				245					250					255	
Tyr	Leu	Leu	Glu	Lys	Ser	Arg	Ala	Ile	Arg	Gln	Ala	Lys	Glu	Glu	Arg
			260					265					270		
Thr	Phe	His	Ile	Phe	Tyr	Tyr	Leu	Leu	Ser	Gly	Ala	Gly	Glu	His	Leu
		275					280					285			
Lys	Thr	Asp	Leu	Leu	Leu	Glu	Pro	Tyr	Asn	Lys	Tyr	Arg	Phe	Leu	Ser
	290					295					300				
Asn	Gly	His	Val	Thr	Ile	Pro	Gly	Gln	Gln	Asp	Lys	Asp	Met	Phe	Gln
	305				310					315					320
Glu	Thr	Met	Glu	Ala	Met	Arg	Ile	Met	Gly	Ile	Pro	Glu	Glu	Glu	Gln
				325					330					335	
Met	Gly	Leu	Leu	Arg	Val	Ile	Ser	Gly	Val	Leu	Gln	Leu	Gly	Asn	Ile
			340					345					350		
Val	Phe	Lys	Lys	Glu	Arg	Asn	Thr	Asp	Gln	Ala	Ser	Met	Pro	Asp	Asn

355						360						365					
Thr	Ala	Ala	Gln	Lys	Val	Ser	His	Leu	Leu	Gly	Ile	Asn	Val	Thr	Asp		
370						375					380						
Phe	Thr	Arg	Gly	Ile	Leu	Thr	Pro	Arg	Ile	Lys	Val	Gly	Arg	Asp	Tyr		
385					390					395					400		
Val	Gln	Lys	Ala	Gln	Thr	Lys	Glu	Gln	Ala	Asp	Phe	Ala	Ile	Glu	Ala		
				405					410					415			
Leu	Ala	Lys	Ala	Thr	Tyr	Glu	Arg	Met	Phe	Arg	Trp	Leu	Val	Leu	Arg		
			420					425					430				
Ile	Asn	Lys	Ala	Leu	Asp	Lys	Thr	Lys	Arg	Gln	Gly	Ala	Ser	Phe	Ile		
		435					440					445					
Gly	Ile	Leu	Asp	Ile	Ala	Gly	Phe	Glu	Ile	Phe	Asp	Leu	Asn	Ser	Phe		
450						455					460						
Glu	Gln	Leu	Cys	Ile	Asn	Tyr	Thr	Asn	Glu	Lys	Leu	Gln	Gln	Leu	Phe		
465					470					475					480		
Asn	His	Thr	Met	Phe	Ile	Leu	Glu	Gln	Glu	Glu	Tyr	Gln	Arg	Glu	Gly		
				485					490					495			
Ile	Glu	Trp	Asn	Phe	Ile	Asp	Phe	Gly	Leu	Asp	Leu	Gln	Pro	Cys	Ile		
			500					505					510				
Asp	Leu	Ile	Glu	Lys	Pro	Ala	Gly	Pro	Pro	Gly	Ile	Leu	Ala	Leu	Leu		
		515					520					525					
Asp	Glu	Glu	Cys	Trp	Phe	Pro	Lys	Ala	Thr	Asp	Lys	Ser	Phe	Val	Glu		
	530					535					540						
Lys	Val	Met	Gln	Glu	Gln	Gly	Thr	His	Pro	Lys	Phe	Gln	Lys	Pro	Lys		
545					550					555					560		
Gln	Leu	Lys	Asp	Lys	Ala	Asp	Phe	Cys	Ile	Ile	His	Tyr	Ala	Gly	Lys		
				565					570					575			
Val	Asp	Tyr	Lys	Ala	Asp	Glu	Trp	Leu	Met	Lys	Asn	Met	Asp	Pro	Leu		
			580					585					590				
Asn	Asp	Asn	Ile	Ala	Thr	Leu	Leu	His	Gln	Ser	Ser	Asp	Lys	Phe	Val		
		595					600					605					
Ser	Glu	Leu	Trp	Lys	Asp	Val	Asp	Arg	Ile	Ile	Gly	Leu	Asp	Gln	Val		
	610					615					620						
Ala	Gly	Met	Ser	Glu	Thr	Ala	Leu	Pro	Gly	Ala	Phe	Lys	Thr	Arg	Lys		
625					630					635					640		
Gly	Met	Phe	Arg	Thr	Val	Gly	Gln	Leu	Tyr	Lys	Glu	Gln	Leu	Ala	Lys		
				645					650					655			
Leu	Met	Ala	Ser	Leu	Arg	Asn	Thr	Asn	Pro	Asn	Phe	Val	Arg	Cys	Ile		
			660					665					670				
Ile	Pro	Asn	His	Glu	Lys	Lys	Ala	Gly	Lys	Leu	Asp	Pro	His	Leu	Val		
		675					680					685					
Leu	Asp	Gln	Leu	Arg	Cys	Asn	Gly	Val	Leu	Glu	Gly	Ile	Arg	Ile	Cys		

690 695 700
 Arg Gln Gly Phe Pro Asn Arg Val Val Phe Gln Glu Phe Arg Gln Arg
 705 710 715 720
 Tyr Glu Ile Leu Thr Pro Asn Ser Ile Pro Lys Gly Phe Met Asp Gly
 725 730 735
 Lys Gln Ala Cys Val Leu Met Ile Lys Ala Leu Glu Leu Asp Ser Asn
 740 745 750
 Leu Tyr Arg Ile Gly Gln Ser Lys Val Phe Phe Arg Ala Gly Val Leu
 755 760 765
 Ala His Leu Glu Glu Glu Arg Asp Leu Lys Ile Thr Asp Val Ile Ile
 770 775 780
 Gly Phe Gln Ala Cys Cys Arg Gly Tyr Leu Ala Arg Lys Ala Phe Ala
 785 790 795 800
 Lys Arg Gln Gln Gln Leu Thr Ala Met Lys Val Leu Gln Arg Asn Cys
 805 810 815
 Ala Ala Tyr Leu Lys Leu Arg Asn Trp Gln Trp Trp Arg Leu Phe Thr
 820 825 830
 Lys Val Lys Pro Leu Leu Gln Val Ser Arg Gln Glu Glu Glu Met Met
 835 840 845
 Ala Lys Glu Glu Glu Leu Val Lys Val Arg Glu Lys Gln Leu Ala Ala
 850 855 860
 Glu Asn Arg Leu Met Glu Met Glu Thr Leu Gln Ser Gln Leu Met Ala
 865 870 875 880
 Glu Lys Leu Gln Leu Gln Glu Gln Leu Gln Ala Glu Thr Glu Leu Cys
 885 890 895
 Ala Glu Ala Glu Glu Leu Arg Ala Arg Leu Thr Ala Lys Lys Gln Glu
 900 905 910
 Leu Glu Glu Ile Cys His Asp Leu Glu Ala Arg Val Glu Glu Glu Glu
 915 920 925
 Glu Arg Tyr Gln His Leu Gln Ala Glu Lys Lys Lys Met Gln Gln Asn
 930 935 940
 Ile Gln Glu Leu Glu Glu Gln Leu Glu Glu Glu Glu Ser Ala Arg Gln
 945 950 955 960
 Lys Leu Gln Leu Glu Lys Val Thr Thr Glu Ala Lys Leu Lys Lys Leu
 965 970 975
 Glu Glu Glu Gln Ile Ile Leu Glu Asp Gln Asn Cys Lys Leu Ala Lys
 980 985 990
 Glu Lys Lys Leu Leu Glu Asp Arg Ile Ala Glu Phe Thr Thr Asn Leu
 995 1000 1005
 Thr Glu Glu Glu Glu Lys Ser Lys Ser Leu Ala Lys Leu Lys Asn Lys
 1010 1015 1020
 His Glu Ala Met Ile Thr Asp Leu Glu Glu Arg Leu Arg Arg Glu Glu
 Page 233

1025 1030 1035 1040
 Lys Gln Arg Gln Glu Leu Glu Lys Thr Arg Arg Lys Leu Glu Gly Asp
 1045 1050 1055
 Ser Thr Asp Leu Ser Asp Gln Ile Ala Glu Leu Gln Ala Gln Ile Ala
 1060 1065 1070
 Glu Leu Lys Met Gln Leu Ala Lys Lys Glu Glu Glu Leu Gln Ala Ala
 1075 1080 1085
 Leu Ala Arg Val Glu Glu Glu Ala Ala Gln Lys Asn Met Ala Leu Lys
 1090 1095 1100
 Lys Ile Arg Glu Leu Glu Ser Gln Ile Ser Glu Leu Gln Glu Asp Leu
 1105 1110 1115 1120
 Glu Ser Glu Arg Ala Ser Arg Asn Lys Ala Glu Lys Gln Lys Arg Asp
 1125 1130 1135
 Leu Gly Glu Glu Leu Glu Ala Leu Lys Thr Glu Leu Glu Asp Thr Leu
 1140 1145 1150
 Asp Ser Thr Ala Ala Gln Gln Glu Leu Arg Ser Lys Arg Glu Gln Glu
 1155 1160 1165
 Val Asn Ile Leu Lys Lys Thr Leu Glu Glu Glu Ala Lys Thr His Glu
 1170 1175 1180
 Ala Gln Ile Gln Glu Met Arg Gln Lys His Ser Gln Ala Val Glu Glu
 1185 1190 1195 1200
 Leu Ala Glu Gln Leu Glu Gln Thr Lys Arg Val Lys Ala Asn Leu Glu
 1205 1210 1215
 Lys Ala Lys Gln Thr Leu Glu Asn Glu Arg Gly Glu Leu Ala Asn Glu
 1220 1225 1230
 Val Lys Val Leu Leu Gln Gly Gly Arg Asp Ser Glu His Lys Arg Lys
 1235 1240 1245
 Lys Val Glu Ala Gln Leu Gln Glu Leu Gln Val Lys Phe Asn Glu Gly
 1250 1255 1260
 Glu Arg Val Arg Thr Glu Leu Ala Asp Lys Val Thr Lys Leu Gln Val
 1265 1270 1275 1280
 Glu Leu Asp Asn Val Thr Gly Leu Leu Ser Gln Ser Asp Ser Lys Ser
 1285 1290 1295
 Ser Lys Leu Thr Lys Asp Phe Ser Ala Leu Glu Ser Gln Leu Gln Asp
 1300 1305 1310
 Thr Gln Glu Leu Leu Gln Glu Glu Asn Arg Gln Lys Leu Ser Leu Ser
 1315 1320 1325
 Thr Lys Leu Lys Gln Val Glu Asp Glu Lys Asn Ser Phe Arg Glu Gln
 1330 1335 1340
 Leu Glu Glu Glu Glu Glu Glu Ala Lys His Asn Leu Glu Lys Gln Ile
 1345 1350 1355 1360
 Ala Thr Leu His Ala Gln Val Ala Asp Met Lys Lys Lys Met Glu Asp
 Page 234

1365 1370 1375
 Ser Val Gly Cys Leu Glu Thr Ala Glu Glu Val Lys Arg Lys Leu Gln
 1380 1385 1390
 Lys Asp Leu Glu Gly Leu Ser Gln Arg His Glu Glu Lys Val Ala Ala
 1395 1400 1405
 Tyr Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu Leu Asp
 1410 1415 1420
 Asp Leu Leu Val Asp Leu Asp His Gln Arg Gln Ser Ala Cys Asn Leu
 1425 1430 1435 1440
 Glu Lys Lys Gln Lys Lys Phe Asp Gln Leu Leu Ala Glu Glu Lys Thr
 1445 1450 1455
 Ile Ser Ala Lys Tyr Ala Glu Glu Arg Asp Arg Ala Glu Ala Glu Ala
 1460 1465 1470
 Arg Glu Lys Glu Thr Lys Ala Leu Ser Leu Ala Arg Ala Leu Glu Glu
 1475 1480 1485
 Ala Met Glu Gln Lys Ala Glu Leu Glu Arg Leu Asn Lys Gln Phe Arg
 1490 1495 1500
 Thr Glu Met Glu Asp Leu Met Ser Ser Lys Asp Asp Val Gly Lys Ser
 1505 1510 1515 1520
 Val His Glu Leu Glu Lys Ser Lys Arg Ala Leu Glu Gln Gln Val Glu
 1525 1530 1535
 Glu Met Lys Thr Gln Leu Glu Glu Leu Glu Asp Glu Leu Gln Ala Thr
 1540 1545 1550
 Glu Asp Ala Lys Leu Arg Leu Glu Val Asn Leu Gln Ala Met Lys Ala
 1555 1560 1565
 Gln Phe Glu Arg Asp Leu Gln Gly Arg Asp Glu Gln Ser Glu Glu Lys
 1570 1575 1580
 Lys Lys Gln Leu Val Arg Gln Val Arg Glu Met Glu Ala Glu Leu Glu
 1585 1590 1595 1600
 Asp Glu Arg Lys Gln Arg Ser Met Ala Val Ala Ala Arg Lys Lys Leu
 1605 1610 1615
 Glu Met Asp Leu Lys Asp Leu Glu Ala His Ile Asp Ser Ala Asn Lys
 1620 1625 1630
 Asn Arg Asp Glu Ala Ile Lys Gln Leu Arg Lys Leu Gln Ala Gln Met
 1635 1640 1645
 Lys Asp Cys Met Arg Glu Leu Asp Asp Thr Arg Ala Ser Arg Glu Glu
 1650 1655 1660
 Ile Leu Ala Gln Ala Lys Glu Asn Glu Lys Lys Leu Lys Ser Met Glu
 1665 1670 1675 1680
 Ala Glu Met Ile Gln Leu Gln Glu Glu Leu Ala Ala Ala Glu Arg Ala
 1685 1690 1695
 Lys Arg Gln Ala Gln Gln Glu Arg Asp Glu Leu Ala Asp Glu Ile Ala
 Page 235

1700 1705 1710
 Asn Ser Ser Gly Lys Gly Ala Leu Ala Leu Glu Glu Lys Arg Arg Leu
 1715 1720 1725
 Glu Ala Arg Ile Ala Gln Leu Glu Glu Glu Leu Glu Glu Glu Gln Gly
 1730 1735 1740
 Asn Thr Glu Leu Ile Asn Asp Arg Leu Lys Lys Ala Asn Leu Gln Ile
 1745 1750 1755 1760
 Asp Gln Ile Asn Ala Asp Leu Asn Leu Glu Arg Gly His Ala Gln Lys
 1765 1770 1775
 Asn Glu Asn Ala Arg Gln Gln Leu Glu Arg Gln Asn Lys Glu Leu Lys
 1780 1785 1790
 Val Lys Leu Gln Glu Met Glu Gly Thr Val Lys Ser Lys Tyr Lys Ala
 1795 1800 1805
 Ser Ile Thr Ala Leu Glu Ala Lys Ile Ala Gln Leu Glu Glu Gln Leu
 1810 1815 1820
 Asp Asn Glu Thr Lys Glu Arg Gln Ala Ala Cys Lys Gln Val Arg Arg
 1825 1830 1835 1840
 Thr Glu Lys Lys Leu Lys Asp Val Leu Leu Gln Val Asp Asp Glu Arg
 1845 1850 1855
 Arg Asn Ala Glu Gln Tyr Lys Asp Gln Ala Asp Lys Ala Ser Thr Arg
 1860 1865 1870
 Leu Lys Gln Leu Lys Arg Gln Leu Glu Glu Ala Glu Glu Glu Ala Gln
 1875 1880 1885
 Arg Ala Asn Ala Ser Arg Arg Lys Leu Gln Arg Glu Leu Glu Asp Ala
 1890 1895 1900
 Thr Glu Thr Ala Asp Ala Met Asn Arg Glu Val Ser Ser Leu Lys Asn
 1905 1910 1915 1920
 Lys Leu Arg Arg Gly Asp Leu Pro Phe Val Val Pro Arg Arg Met Ala
 1925 1930 1935
 Arg Lys Gly Ala Gly Asp Gly Ser Asp Glu Glu Val Asp Gly Lys Ala
 1940 1945 1950
 Asp Gly Ala Glu Ala Lys Pro Ala Glu
 1955 1960

<210> 104
 <211> 1960
 <212> PRT
 <213> Homo sapiens

<400> 104
 Met Ala Gln Gln Ala Ala Asp Lys Tyr Leu Tyr Val Asp Lys Asn Phe
 1 5 10 15
 Ile Asn Asn Pro Leu Ala Gln Ala Asp Trp Ala Ala Lys Lys Leu Val
 20 25 30

Trp Val Pro Ser Asp Lys Ser Gly Phe Glu Pro Ala Ser Leu Lys Glu
 35 40 45
 Glu Val Gly Glu Glu Ala Ile Val Glu Leu Val Glu Asn Gly Lys Lys
 50 55 60
 Val Lys Val Asn Lys Asp Asp Ile Gln Lys Met Asn Pro Pro Lys Phe
 65 70 75 80
 Ser Lys Val Glu Asp Met Ala Glu Leu Thr Cys Leu Asn Glu Ala Ser
 85 90 95
 Val Leu His Asn Leu Lys Glu Arg Tyr Tyr Ser Gly Leu Ile Tyr Thr
 100 105 110
 Tyr Ser Gly Leu Phe Cys Val Val Ile Asn Pro Tyr Lys Asn Leu Pro
 115 120 125
 Ile Tyr Ser Glu Glu Ile Val Glu Met Tyr Lys Gly Lys Lys Arg His
 130 135 140
 Glu Met Pro Pro His Ile Tyr Ala Ile Thr Asp Thr Ala Tyr Arg Ser
 145 150 155 160
 Met Met Gln Asp Arg Glu Asp Gln Ser Ile Leu Cys Thr Gly Glu Ser
 165 170 175
 Gly Ala Gly Lys Thr Glu Asn Thr Lys Lys Val Ile Gln Tyr Leu Ala
 180 185 190
 Tyr Val Ala Ser Ser His Lys Ser Lys Lys Asp Gln Gly Glu Leu Glu
 195 200 205
 Arg Gln Leu Leu Gln Ala Asn Pro Ile Leu Glu Ala Phe Gly Asn Ala
 210 215 220
 Lys Thr Val Lys Asn Asp Asn Ser Ser Arg Phe Gly Lys Phe Ile Arg
 225 230 235 240
 Ile Asn Phe Asp Val Asn Gly Tyr Ile Val Gly Ala Asn Ile Glu Thr
 245 250 255
 Tyr Leu Leu Glu Lys Ser Arg Ala Ile Arg Gln Ala Lys Glu Glu Arg
 260 265 270
 Thr Phe His Ile Phe Tyr Tyr Leu Leu Ser Gly Ala Gly Glu His Leu
 275 280 285
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 Glu Gln Leu Cys Ile Asn Tyr Thr Asn Glu Lys Leu Gln Gln Leu Phe
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 Lys Val Met Gln Glu Gln Gly Thr His Pro Lys Phe Gln Lys Pro Lys
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 Ser Glu Leu Trp Lys Asp Val Asp Arg Ile Ile Gly Leu Asp Gln Val
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Ala	His 770	Leu	Glu	Glu	Glu	Arg 775	Asp	Leu	Lys	Ile	Thr 780	Asp	Val	Ile	Ile
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Glu 865	Asn	Arg	Leu	Thr	Glu 870	Met	Glu	Thr	Leu	Gln 875	Ser	Gln	Leu	Met	Ala 880
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 225 230 235 240
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 260 265 270
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 Asn Ser Ser Gly Lys Gly Ala Leu Ala Leu Glu Glu Lys Arg Arg Leu
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 1795 1800 1805
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 Page 248

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Val Phe Lys Lys Glu Arg Asn Thr Asp Gln Ala Ser Met Pro Asp Asn
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370 375 380
Phe Thr Arg Gly Ile Leu Thr Pro Arg Ile Lys Val Gly Arg Asp Tyr
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 Lys Ile Arg Glu Leu Glu Ser Gln Ile Thr Glu Leu Gln Glu Asp Leu
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 Glu Ser Glu Arg Ala Ser Arg Asn Lys Ala Glu Lys Gln Lys Arg Asp
 1125 1130 1135
 Leu Gly Glu Glu Leu Glu Ala Leu Lys Thr Glu Leu Glu Asp Thr Leu
 1140 1145 1150
 Asp Ser Thr Ala Ala Gln Gln Glu Leu Arg Ser Lys Arg Glu Gln Glu
 1155 1160 1165
 Val Thr Val Leu Lys Lys Thr Leu Glu Asp Glu Ala Lys Thr His Glu
 1170 1175 1180
 Ala Gln Ile Gln Glu Met Arg Gln Lys His Ser Gln Ala Ile Glu Glu
 1185 1190 1195 1200
 Leu Ala Glu Gln Leu Glu Gln Thr Lys Arg Val Lys Ala Asn Leu Glu
 1205 1210 1215
 Lys Ala Lys Gln Ala Leu Glu Ser Glu Arg Ala Glu Leu Ser Asn Glu
 1220 1225 1230
 Val Lys Val Leu Leu Gln Gly Lys Gly Asp Ala Glu His Lys Arg Lys
 1235 1240 1245
 Lys Val Asp Ala Gln Leu Gln Glu Leu Gln Val Lys Phe Thr Glu Gly
 1250 1255 1260
 Glu Arg Val Lys Thr Glu Leu Ala Glu Arg Val Asn Lys Leu Gln Val
 1265 1270 1275 1280
 Glu Leu Asp Asn Val Thr Gly Leu Leu Asn Gln Ser Asp Ser Lys Ser
 1285 1290 1295
 Ile Lys Leu Ala Lys Asp Phe Ser Ala Leu Glu Ser Gln Leu Gln Asp
 1300 1305 1310
 Thr Gln Glu Leu Leu Gln Glu Glu Thr Arg Leu Lys Leu Ser Phe Ser
 1315 1320 1325
 Thr Lys Leu Lys Gln Thr Glu Asp Glu Lys Asn Ala Leu Lys Glu Gln
 1330 1335 1340
 Leu Glu Glu Glu Glu Glu Ala Lys Arg Asn Leu Glu Lys Gln Ile Ser
 1345 1350 1355 1360
 Val Leu Gln Gln Gln Ala Val Glu Ala Arg Lys Lys Met Asp Asp Gly
 1365 1370 1375
 Leu Gly Cys Leu Glu Ile Ala Glu Glu Ala Lys Lys Lys Leu Gln Lys
 1380 1385 1390
 Asp Leu Glu Ser Leu Thr Gln Arg Tyr Glu Glu Lys Ile Ala Ala Tyr
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1395 1400 1405
 Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu Leu Asp Asp
 1410 1415 1420
 Ile Ala Val Asp Leu Asp His Gln Arg Gln Thr Val Ser Asn Leu Glu
 1425 1430 1435 1440
 Lys Lys Gln Lys Lys Phe Asp Gln Leu Leu Ala Glu Glu Lys Asn Ile
 1445 1450 1455
 Ser Ala Lys Tyr Ala Glu Glu Arg Asp Arg Ala Glu Ala Glu Ala Arg
 1460 1465 1470
 Glu Lys Glu Thr Lys Ala Leu Ser Leu Ala Arg Ala Leu Glu Glu Ala
 1475 1480 1485
 Ile Glu Gln Lys Ala Glu Leu Glu Arg Val Asn Lys Gln Phe Arg Thr
 1490 1495 1500
 Glu Met Glu Asp Leu Met Ser Ser Lys Asp Asp Val Gly Lys Ser Val
 1505 1510 1515 1520
 His Glu Leu Glu Lys Ala Lys Arg Ala Leu Glu Gln Gln Val Glu Glu
 1525 1530 1535
 Met Lys Thr Gln Leu Glu Glu Leu Glu Asp Glu Leu Gln Ala Thr Glu
 1540 1545 1550
 Asp Ala Lys Leu Arg Leu Glu Val Asn Gln Gln Ala Met Lys Ala Gln
 1555 1560 1565
 Phe Asp Arg Asp Leu Leu Gly Arg Asp Glu Gln Asn Glu Glu Lys Arg
 1570 1575 1580
 Lys Gln Leu Ile Arg Gln Val Arg Glu Met Glu Val Glu Leu Glu Asp
 1585 1590 1595 1600
 Glu Arg Lys Gln Arg Ser Ile Ala Val Ala Ala Arg Lys Lys Leu Glu
 1605 1610 1615
 Leu Asp Leu Lys Asp Leu Glu Ser His Ile Asp Thr Ala Asn Lys Asn
 1620 1625 1630
 Arg Asp Glu Ala Ile Lys His Val Arg Lys Leu Gln Ala Gln Met Lys
 1635 1640 1645
 Asp Tyr Met Arg Glu Leu Glu Asp Thr Arg Thr Ser Arg Glu Glu Ile
 1650 1655 1660
 Leu Ala Gln Ala Lys Glu Asn Glu Lys Lys Leu Lys Ser Met Glu Ala
 1665 1670 1675 1680
 Glu Met Ile Gln Leu Gln Glu Glu Leu Ala Ala Ala Glu Arg Ala Lys
 1685 1690 1695
 Arg Gln Ala Gln Gln Glu Arg Asp Glu Leu Ala Asp Glu Ile Ala Asn
 1700 1705 1710
 Ser Ser Gly Lys Gly Ala Leu Ala Met Glu Glu Lys Arg Arg Leu Glu
 1715 1720 1725
 Ala Arg Ile Ala Gln Leu Glu Glu Glu Leu Glu Glu Glu Gln Gly Asn

1730 1735 1740
 Thr Glu Ile Ile Asn Asp Arg Leu Lys Lys Ala Asn Leu Gln Ile Asp
 1745 1750 1755 1760
 Gln Met Asn Ala Asp Leu Asn Ala Glu Arg Ser Asn Ala Gln Lys Asn
 1765 1770 1775
 Glu Asn Ala Arg Gln Gln Met Glu Arg Gln Asn Lys Glu Leu Lys Leu
 1780 1785 1790
 Lys Leu Gln Glu Met Glu Ser Ala Val Lys Ser Lys Tyr Lys Ala Thr
 1795 1800 1805
 Ile Thr Ala Leu Glu Ala Lys Ile Val Gln Leu Glu Glu Gln Leu Asp
 1810 1815 1820
 Met Glu Thr Lys Glu Arg Gln Ala Ala Ser Lys Gln Val Arg Arg Ala
 1825 1830 1835 1840
 Glu Lys Lys Leu Lys Asp Ile Leu Leu Gln Val Asp Asp Glu Arg Arg
 1845 1850 1855
 Asn Ala Glu Gln Phe Lys Asp Gln Ala Asp Lys Ala Asn Met Arg Leu
 1860 1865 1870
 Lys Gln Leu Lys Arg Gln Leu Glu Glu Ala Glu Glu Glu Ala Gln Arg
 1875 1880 1885
 Ala Asn Val Arg Arg Lys Leu Gln Arg Glu Leu Asp Asp Ala Thr Glu
 1890 1895 1900
 Thr Ala Asp Ala Met Asn Arg Glu Val Ser Ser Leu Lys Ser Lys Leu
 1905 1910 1915 1920
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 1925 1930 1935
 Gly Thr Gly Glu Cys Ser Asp Glu Glu Val Asp Gly Lys Ala Glu Ala
 1940 1945 1950
 Gly Asp Ala Lys Ala Thr Glu
 1955

<210> 107
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 <212> PRT
 <213> Rattus norvegicus

<400> 107
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 20 25 30
 Trp Val Pro Ser Glu Lys Ser Gly Phe Glu Ala Ala Ser Leu Lys Glu
 35 40 45
 Glu Val Gly Asp Glu Ala Ile Val Glu Leu Ala Glu Asn Gly Lys Lys
 50 55 60

Val Lys Val Asn Lys Asp Asp Ile Gln Lys Met Asn Pro Pro Lys Phe
 65 70 75 80
 Ser Lys Val Glu Asp Met Ala Glu Leu Thr Cys Leu Asn Glu Ala Ser
 85 90 95
 Val Leu His Asn Leu Lys Glu Arg Tyr Tyr Ser Gly Leu Ile Tyr Thr
 100 105 110
 Tyr Ser Gly Leu Phe Cys Val Val Ile Asn Pro Tyr Lys Asn Leu Pro
 115 120 125
 Ile Tyr Ser Glu Glu Ile Val Glu Met Tyr Lys Gly Lys Lys Arg His
 130 135 140
 Glu Met Pro Pro His Ile Tyr Ala Ile Thr Asp Thr Ala Tyr Arg Ser
 145 150 155 160
 Met Met Gln Asp Arg Glu Asp Gln Ser Ile Leu Cys Thr Gly Glu Ser
 165 170 175
 Gly Ala Gly Lys Thr Glu Asn Thr Lys Lys Val Ile Gln Tyr Leu Ala
 180 185 190
 His Val Ala Ser Ser His Lys Ser Lys Lys Asp Gln Gly Glu Leu Glu
 195 200 205
 Arg Gln Leu Leu Gln Ala Asn Pro Ile Leu Glu Ala Phe Gly Asn Ala
 210 215 220
 Lys Thr Val Lys Asn Asp Asn Ser Ser Arg Phe Gly Lys Phe Ile Arg
 225 230 235 240
 Ile Asn Phe Asp Val Asn Gly Tyr Ile Val Gly Ala Asn Ile Glu Thr
 245 250 255
 Tyr Leu Leu Glu Lys Ser Arg Ala Ile Arg Gln Ala Lys Glu Glu Arg
 260 265 270
 Thr Phe His Ile Phe Tyr Tyr Leu Leu Ser Gly Ala Gly Glu His Leu
 275 280 285
 Lys Thr Asp Leu Leu Leu Glu Pro Tyr Gly Lys Tyr Arg Phe Leu Ser
 290 295 300
 Asn Gly His Val Thr Ile Pro Gly Gln Gln Asp Lys Asp Met Phe Gln
 305 310 315 320
 Glu Thr Met Glu Ala Met Arg Ile Met Gly Ile Pro Asp Glu Glu Gln
 325 330 335
 Ile Gly Leu Leu Lys Val Ile Ser Gly Val Leu Gln Leu Gly Asn Ile
 340 345 350
 Val Phe Lys Lys Glu Arg Asn Thr Asp Gln Ala Ser Met Pro Asp Asn
 355 360 365
 Thr Ala Ala Gln Lys Val Ser His Leu Leu Gly Ile Asn Val Thr Asp
 370 375 380
 Phe Thr Arg Gly Ile Leu Thr Pro Arg Ile Lys Val Gly Arg Asp Tyr
 385 390 395 400

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Val	Gln	Lys	Ala	Gln	Thr	Lys	Glu	Gln	Ala	Asp	Phe	Ala	Ile	Glu	Ala
			405						410					415	
Leu	Ala	Lys	Ala	Thr	Tyr	Glu	Gln	Met	Phe	Arg	Trp	Leu	Val	Met	Arg
			420					425					430		
Ile	Asn	Lys	Ala	Leu	Asp	Lys	Thr	Lys	Arg	Gln	Gly	Ala	Ser	Phe	Ile
		435					440					445			
Gly	Ile	Leu	Asp	Ile	Ala	Gly	Phe	Glu	Ile	Phe	Glu	Leu	Asn	Ser	Phe
	450					455					460				
Glu	Gln	Leu	Cys	Ile	Asn	Tyr	Thr	Asn	Glu	Lys	Leu	Gln	Gln	Leu	Phe
	465				470					475					480
Asn	His	Thr	Met	Phe	Ile	Glu	Gln	Glu	Glu	Tyr	Gln	Arg	Glu	Gly	Ile
				485					490					495	
Glu	Trp	Asn	Phe	Ile	Asp	Phe	Gly	Leu	Asp	Leu	Gln	Pro	Cys	Ile	Asp
			500					505					510		
Leu	Ile	Glu	Arg	Pro	Ala	Asn	Pro	Pro	Gly	Val	Leu	Ala	Leu	Leu	Asp
		515					520					525			
Glu	Glu	Cys	Trp	Phe	Pro	Lys	Ala	Thr	Asp	Lys	Thr	Phe	Val	Glu	Lys
		530				535					540				
Leu	Val	Gln	Glu	Gln	Gly	Thr	His	Ser	Lys	Phe	Gln	Lys	Pro	Arg	Gln
	545				550					555					560
Leu	Lys	Asp	Lys	Ala	Asp	Phe	Cys	Ile	Ile	His	Tyr	Ala	Gly	Lys	Val
				565					570					575	
Asp	Tyr	Lys	Gly	Asp	Glu	Trp	Leu	Met	Lys	Asn	Met	Asp	Pro	Leu	Asn
			580					585					590		
Asp	Asn	Val	Ala	Thr	Leu	Leu	His	Gln	Ser	Ser	Asp	Lys	Phe	Val	Ala
		595					600					605			
Glu	Leu	Trp	Lys	Asp	Val	Asp	Arg	Ile	Val	Gly	Leu	Asp	Gln	Val	Thr
	610					615					620				
Gly	Ile	Thr	Glu	Thr	Ala	Phe	Gly	Ser	Ala	Tyr	Lys	Thr	Lys	Lys	Gly
	625				630					635					640
Met	Phe	Arg	Thr	Val	Gly	Gln	Leu	Tyr	Lys	Glu	Ser	Leu	Thr	Lys	Leu
				645					650					655	
Met	Ala	Thr	Leu	Arg	Asn	Thr	Asn	Pro	Asn	Phe	Val	Arg	Cys	Ile	Ile
			660					665					670		
Pro	Asn	His	Glu	Lys	Arg	Ala	Gly	Lys	Leu	Asp	Pro	His	Leu	Val	Leu
		675					680					685			
Asp	Gln	Leu	Arg	Cys	Asn	Gly	Val	Leu	Glu	Gly	Ile	Arg	Ile	Cys	Arg
	690					695					700				
Gln	Gly	Phe	Pro	Asn	Arg	Ile	Val	Phe	Gln	Glu	Phe	Arg	Gln	Arg	Tyr
	705				710					715					720
Glu	Ile	Leu	Thr	Pro	Asn	Ala	Ile	Pro	Lys	Gly	Phe	Met	Asp	Gly	Lys
				725					730					735	

Gln Ala Cys Glu Arg Met Ile Arg Ala Leu Glu Leu Asp Pro Asn Leu
 740 745 750
 Tyr Arg Ile Gly Gln Ser Lys Ile Phe Phe Arg Ala Gly Val Leu Ala
 755 760 765
 His Leu Glu Glu Glu Arg Asp Leu Lys Ile Thr Asp Ile Ile Ile Phe
 770 775 780
 Phe Gln Ala Val Cys Arg Gly Tyr Leu Ala Arg Lys Ala Phe Ala Lys
 785 790 795 800
 Lys Gln Gln Gln Leu Ser Ala Leu Lys Ile Leu Gln Arg Asn Cys Ala
 805 810 815
 Ala Tyr Leu Lys Leu Arg His Trp Gln Trp Trp Arg Val Phe Thr Lys
 820 825 830
 Val Lys Pro Leu Leu Gln Val Thr Arg Gln Glu Glu Glu Leu Gln Ala
 835 840 845
 Lys Asp Glu Glu Leu Met Lys Lys Val Glu Lys Gln Thr Lys Val Glu
 850 855 860
 Ala Glu Leu Glu Glu Met Glu Arg Lys His Gln Gln Leu Leu Glu Glu
 865 870 875 880
 Lys Asn Ile Leu Ala Glu Gln Leu Gln Ala Glu Thr Glu Leu Phe Ala
 885 890 895
 Glu Ala Glu Glu Met Arg Ala Arg Leu Ala Ala Lys Lys Gln Glu Leu
 900 905 910
 Glu Glu Ile Leu His Asp Leu Glu Ser Arg Val Glu Glu Glu Glu Glu
 915 920 925
 Arg Asn Gln Ile Leu Gln Asn Glu Lys Lys Lys Glu Gln Gly His Lys
 930 935 940
 Asn Asp Leu Glu Glu Gln Leu Asp Glu Met Glu Ser Ala Arg Gln Lys
 945 950 955 960
 Leu Gln Leu Glu Lys Val Thr Thr Glu Ala Lys Leu Lys Lys Leu Glu
 965 970 975
 Glu Glu Gln Ile Ile Leu Glu Asp Gln Asn Cys Lys Leu Ala Lys Glu
 980 985 990
 Lys Lys Leu Leu Glu Asp Arg Ile Ala Glu Phe Thr Thr Asn Leu Thr
 995 1000 1005
 Glu Glu Glu Glu Lys Ser Lys Ser Leu Ala Lys Leu Lys Asn Lys His
 1010 1015 1020
 Glu Ala Met Ile Thr Asp Leu Glu Glu Arg Leu Arg Arg Glu Glu Lys
 1025 1030 1035 1040
 Gln Arg Gln Glu Leu Glu Lys Thr Arg Arg Lys Leu Glu Gly Asp Ser
 1045 1050 1055
 Thr Asp Leu Ser Asp Gln Ile Ala Glu Leu Gln Ala Gln Ile Ala Glu
 1060 1065 1070

Leu Lys Met Gln Leu Ala Lys Lys Glu Glu Glu Leu Gln Ala Ala Leu
 1075 1080 1085
 Ala Arg Val Glu Glu Glu Ala Ala Gln Lys Asn Met Ala Leu Lys Lys
 1090 1095 1100
 Ile Arg Glu Leu Glu Ser Gln Ile Ser Glu Leu Gln Glu Asp Leu Glu
 1105 1110 1115 1120
 Ser Glu Arg Ala Ser Arg Asn Lys Ala Glu Lys Gln Lys Arg Asp Leu
 1125 1130 1135
 Gly Glu Glu Leu Glu Ala Leu Lys Thr Glu Leu Glu Asp Leu Thr Asp
 1140 1145 1150
 Ser Thr Ala Ala Gln Gln Glu Leu Arg Ser Lys Arg Glu Gln Glu Val
 1155 1160 1165
 Asn Ile Leu Lys Lys Thr Leu Glu Glu Glu Ala Lys Thr His Glu Ala
 1170 1175 1180
 Gln Ile Gln Glu Met Arg Gln Lys His Ser Gln Ala Val Glu Glu Leu
 1185 1190 1195 1200
 Ala Glu Gln Leu Glu Gln Thr Lys Arg Lys Val Ala Asn Leu Glu Lys
 1205 1210 1215
 Ala Lys Gln Thr Leu Glu Asn Glu Arg Gly Glu Leu Ala Asn Glu Val
 1220 1225 1230
 Lys Val Leu Leu Gln Gly Gly Arg Asp Ser Glu His Lys Arg Lys Lys
 1235 1240 1245
 Val Glu Ala Gln Leu Gln Glu Leu Gln Val Lys Phe Asn Glu Gly Glu
 1250 1255 1260
 Arg Arg Val Thr Glu Leu Ala Asp Lys Val Thr Lys Leu Gln Val Glu
 1265 1270 1275 1280
 Leu Asp Asn Val Thr Gly Leu Leu Ser Gln Ser Asp Ser Lys Ser Ser
 1285 1290 1295
 Lys Leu Thr Lys Asp Phe Ser Ala Leu Glu Ser Gln Leu Gln Asp Thr
 1300 1305 1310
 Gln Glu Leu Leu Gln Glu Glu Asn Arg Gln Lys Leu Ser Leu Ser Thr
 1315 1320 1325
 Lys Leu Lys Gln Val Glu Asp Glu Lys Asn Ser Phe Arg Glu Gln Leu
 1330 1335 1340
 Glu Glu Glu Glu Glu Glu Ala Lys His Asn Leu Glu Lys Gln Ile Ala
 1345 1350 1355 1360
 Thr Leu His Ala Gln Val Ala Asp Met Lys Lys Lys Met Glu Asp Ser
 1365 1370 1375
 Val Gly Cys Leu Glu Thr Ala Glu Glu Val Lys Arg Lys Leu Gln Lys
 1380 1385 1390
 Asp Leu Glu Gly Leu Ser Gln Arg His Glu Glu Lys Val Ala Ala Tyr
 1395 1400 1405

Asp Lys Leu Glu Lys Thr Lys Thr Arg Leu Gln Gln Glu Leu Asp Asp
 1410 1415 1420
 Leu Leu Val Asp Leu Asp His Gln Arg Gln Ser Ala Cys Asn Leu Glu
 1425 1430 1435 1440
 Lys Lys Gln Lys Lys Phe Asp Gln Leu Leu Ala Glu Glu Ile Thr Lys
 1445 1450 1455
 Ser Ala Lys Tyr Ala Glu Glu Arg Ala Arg Asp Ala Glu Glu Arg Ala
 1460 1465 1470
 Glu Lys Ala Thr Lys Glu Leu Ser Leu Ala Arg Ala Glu Leu Glu Ala
 1475 1480 1485
 Met Glu Gln Lys Ala Glu Phe Leu Arg Lys Asn Leu Gln Glu Met Thr
 1490 1495 1500
 Glu Arg Leu Asp Glu Met Ser Ser Lys Val Asp Asp Ala Lys Ser Val
 1505 1510 1515 1520
 Leu Glu His Glu Lys Ser Lys Leu Gly Arg Glu Gln Gln Val Met Glu
 1525 1530 1535
 Glu Lys Thr Gln Leu Leu Glu Glu Glu Asp Glu Leu Ala Gln Thr Glu
 1540 1545 1550
 Asp Ala Lys Leu Arg Leu Glu Val Asn Leu Gln Ala Met Lys Ala Gln
 1555 1560 1565
 Phe Glu Arg Asp Leu Gln Gly Arg Gln Asp Asp Ser Glu Glu Lys Gln
 1570 1575 1580
 Lys Lys Leu Val Arg Gln Val Arg Glu Met Glu Ala Glu Leu Glu Asp
 1585 1590 1595 1600
 Gln Arg Lys Glu Met Ser Arg Ala Arg Ala Ala Val Lys Lys Leu Glu
 1605 1610 1615
 Met Asp Leu Lys Asp Leu Glu Ala His Ile Asp Ser Ala Asn Lys Asn
 1620 1625 1630
 Arg Asp Glu Ala Lys Ile Gln Leu Arg Asn Leu Gln Ala Gln Met Lys
 1635 1640 1645
 Asp Cys Met Arg Glu Leu Asp Asp Thr Arg Ala Ser Arg Glu Glu Ile
 1650 1655 1660
 Ala Leu Gln Ala Lys Glu Asn Glu Lys Lys Leu Lys Ser Met Glu Ala
 1665 1670 1675 1680
 Glu Met Ile Gln Leu Gln Glu Glu Leu Ala Ala Ala Glu Arg Ala Lys
 1685 1690 1695
 Arg Gln Ala Gln Gln Glu Arg Asp Glu Leu Ala Asp Glu Ile Ser Asn
 1700 1705 1710
 Ala Ser Gly Lys Ala Gly Leu Ala Lys Glu Glu Leu Arg Arg Leu Glu
 1715 1720 1725
 Ala Arg Ile Ala Gln Leu Glu Glu Glu Leu Glu Glu Glu Gln Gly Asn
 1730 1735 1740

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Thr Glu Leu Ile Asn Asp Arg Leu Lys Lys Ala Asn Leu Gln Ile Asp
 1745 1750 1755 1760
 Gln Ile Asn Ala Asp Leu Asn Leu Glu Arg Gly His Ala Gln Lys Asn
 1765 1770 1775
 Glu Asn Ala Arg Gln Gln Leu Glu Arg Gln Asn Lys Glu Leu Lys Val
 1780 1785 1790
 Lys Leu Gln Glu Met Glu Gly Thr Val Lys Ser Lys Tyr Lys Ala Ser
 1795 1800 1805
 Ile Thr Ala Leu Glu Ala Lys Ile Ala Gln Leu Glu Glu Gln Leu Asp
 1810 1815 1820
 Asn Glu Thr Lys Glu Arg Gln Ala Ala Cys Lys Gln Val Arg Arg Thr
 1825 1830 1835 1840
 Glu Lys Lys Leu Lys Asp Val Leu Leu Gln Val Asp Asp Glu Arg Arg
 1845 1850 1855
 Asn Ala Glu Gln Tyr Lys Asp Gln Ala Asp Lys Ala Ser Thr Arg Leu
 1860 1865 1870
 Lys Gln Leu Lys Arg Gln Leu Glu Glu Ala Glu Glu Glu Ala Gln Arg
 1875 1880 1885
 Ala Asn Ala Ser Arg Arg Lys Leu Gln Arg Glu Leu Glu Asp Ala Thr
 1890 1895 1900
 Glu Thr Ala Asp Ala Met Asn Arg Glu Val Ser Ser Leu Lys Asn Lys
 1905 1910 1915 1920
 Leu Arg Arg Gly Asp Leu Pro Phe Val Val Thr Arg Arg Leu Val Arg
 1925 1930 1935
 Lys Gly Thr Leu Glu Leu Ser Asp Asp Asp Asp Glu Ser Lys Ala Ser
 1940 1945 1950
 Leu Ile Asn Glu Thr Gln Pro Pro Gln Cys Leu Asp Gln Gln Leu Asp
 1955 1960 1965
 Gln Leu Phe His Trp Pro Val Asn Ala Gly Cys Val Cys Gly Trp Gly
 1970 1975 1980
 Val Glu Gln Thr Gln Gly Glu Glu Ala Val His Lys Cys Arg Thr
 1985 1990 1995

<210> 108

<211> 734

<212> PRT

<213> Artificial Sequence

<220>

 <223> Description of Artificial Sequence: Myosin Head
 (motor domain) sequence

<400> 108

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 1 5 10 15

 His Asn Leu Lys Lys Arg Tyr Lys Ser Asp Leu Ile Tyr Thr Tyr Ser
 Page 260

20 25 30
 Gly Leu Val₃₅ Leu Val Ser Val Asn₄₀ Pro Tyr Lys Arg Leu₄₅ Pro Gln Ile
 Tyr Thr₅₀ Glu Glu Ile Ile Ala₅₅ Lys Tyr Arg Gly Lys₆₀ Arg Arg Tyr Glu
 Leu₆₅ Pro Pro His Ile Phe₇₀ Ala Ile Ala Asp Glu₇₅ Ala Tyr Arg Ser Met₈₀
 Leu Ser Asp Lys₈₅ Glu Asn Gln Ser Ile Leu₉₀ Ile Ser Gly Glu Ser₉₅ Gly
 Ala Gly Lys Thr₁₀₀ Glu Asn Thr Lys₁₀₅ Lys Val Met Gln Tyr Leu₁₁₀ Ala Ala
 Val Ser Gly₁₁₅ Gly Asn Ser Gly₁₂₀ Asn Gly Glu Glu Val₁₂₅ Pro Ser Val Lys
 Val Gly₁₃₀ Arg Val Glu Asp Gln₁₃₅ Ile Leu Gln Ser Asn₁₄₀ Pro Ile Leu Glu
 Ala₁₄₅ Phe Gly Asn Ala Lys₁₅₀ Thr Thr Arg Asn₁₅₅ Asn Ser Ser Arg Phe₁₆₀
 Gly Lys Tyr Ile Glu₁₆₅ Ile Gln Phe Asp Lys₁₇₀ Thr Gly Lys Ile Val₁₇₅ Gly
 Ala Lys Ile Glu₁₈₀ Asn Tyr Leu Leu Glu₁₈₅ Lys Ser Arg Val₁₉₀ Val Tyr Gln
 Thr Glu Gly₁₉₅ Glu Arg Asn Phe His₂₀₀ Ile Phe Tyr Gln Leu₂₀₅ Leu Ala Gly
 Ala Ser Gln Gln Asn Leu Lys₂₁₅ Lys Glu Leu Lys Leu₂₂₀ Thr Asn Asp Pro
 Glu₂₂₅ Asp Tyr His Tyr Leu₂₃₀ Asn Gln Gly Gly Glu₂₃₅ Val Lys Pro Cys Tyr₂₄₀
 Thr Val Asp Gly₂₄₅ Ile Asp Asp Ser Glu Gly₂₅₀ Asn Val Glu Glu Phe Lys₂₅₅
 Glu Thr Arg Lys₂₆₀ Ala Met Asp Ile Leu₂₆₅ Gly Phe Thr Asp Glu₂₇₀ Glu Gln
 Arg Ser Ile₂₇₅ Phe Arg Ile Val Ala₂₈₀ Ala Ile Leu His Leu₂₈₅ Gly Asn Ile
 Lys Phe₂₉₀ Lys Gln Arg Arg Lys₂₉₅ Glu Glu Ala Ala Ile₃₀₀ Pro Asp Asp Asn
 Asn₃₀₅ Ala Asp Thr Lys Ala₃₁₀ Leu Glu Lys Ala Ala₃₁₅ Glu Leu Leu Gly Val₃₂₀
 Asp Ala Thr Glu₃₂₅ Leu Glu Lys Ala Leu Leu₃₃₀ Ser Arg Arg Ile Lys₃₃₅ Thr
 Gly Thr Glu Gly₃₄₀ Arg Lys Ser Thr Val₃₄₅ Thr Lys Pro Gln Asn Val₃₅₀ Glu
 Gln Ala Ser Tyr Ala Arg Asp Ala Leu Ala Lys Ala Leu Tyr Ser Arg
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355 360 365
 Leu Phe Asp Trp Ile Val Asn Arg Ile Asn Lys Thr Leu Asp Phe Lys
 370 375 380
 Ala Lys Glu Gly Gln Asp Ala Ser Phe Ile Gly Val Leu Asp Ile Tyr
 385 390 395 400
 Gly Phe Glu Ile Phe Glu Lys Asn Ser Phe Glu Gln Leu Cys Ile Asn
 405 410 415
 Tyr Val Asn Glu Lys Leu Gln Gln Phe Phe Asn His His Met Phe Lys
 420 425 430
 Leu Glu Gln Glu Glu Tyr Lys Arg Glu Gly Ile Glu Trp Thr Phe Ile
 435 440 445
 Asp Phe Gly Asp Asn Leu Gln Pro Cys Ile Asp Leu Ile Glu Lys Lys
 450 455 460
 Ser Pro Pro Gly Ile Leu Ser Leu Leu Asp Glu Glu Cys Leu Phe Pro
 465 470 475 480
 Lys Ala Gln Ser Gly Thr Asp Gln Thr Phe Leu Asp Lys Leu Tyr Ser
 485 490 495
 Thr Phe Ser Lys His Pro Ala His Phe Glu Lys Phe Ser Pro Arg Phe
 500 505 510
 Arg Gln Lys Lys Ser Gly Ala His Phe Ile Ile Lys His Tyr Ala Gly
 515 520 525
 Asp Val Glu Tyr Asn Val Glu Gly Phe Leu Glu Lys Asn Lys Asp Pro
 530 535 540
 Leu Phe Asp Asp Leu Ile Ser Leu Leu Lys Ser Ser Ser Asn Pro Leu
 545 550 555 560
 Leu Ala Glu Leu Phe Pro Asp Glu Glu Thr Leu Ala Gly Pro Phe Glu
 565 570 575
 Ala Asp Pro Ser Ser Leu Ser Lys Lys Arg Lys Ser Gly Ser Lys Asn
 580 585 590
 Lys Ser Thr Gly Lys Lys Thr Lys Lys Ser Asn Phe Ile Thr Val Gly
 595 600 605
 Ala Gln Phe Lys Glu Ser Leu Asn Glu Leu Met Lys Thr Leu Ser Ser
 610 615 620
 Thr Asn Leu Pro His Phe Val Arg Cys Ile Lys Pro Asn Glu Lys Lys
 625 630 635 640
 Lys Ala Gly Val Phe Asp Ala Ser Leu Val Leu His Gln Leu Arg Cys
 645 650 655
 Leu Gly Val Leu Glu Gly Ile Arg Ile Arg Arg Ala Gly Phe Pro Asn
 660 665 670
 Arg Ile Thr Phe Asp Glu Phe Leu Gln Arg Tyr Arg Ile Leu Ala Pro
 675 680 685
 Lys Thr Trp Pro Lys Trp Ser Gly Asp Ala Lys Lys Gly Glu Lys Asn
 Page 262

690

695

Glu Ile Val Ala Cys Glu Lys Leu Leu Gln Ser Leu Asn Leu Asp Lys
705 710 715 720

Gly Glu Glu Tyr Arg Phe Gly Lys Thr Lys Ile Phe Phe Arg
725 730

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<211> 175
<212> PRT
<213> Homo sapiens

<400> 109
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Leu Pro Ser Ala Arg Ile Arg Cys Pro Lys Gly Ser Lys Ala Tyr Gly
35 40 45
Ser His Cys Tyr Ala Leu Phe Leu Ser Pro Lys Ser Trp Thr Asp Ala
50 55 60
Asp Leu Ala Cys Gln Lys Arg Pro Ser Gly Asn Leu Val Ser Val Leu
65 70 75 80
Ser Gly Ala Glu Gly Ser Phe Val Ser Ser Leu Val Lys Ser Ile Gly
85 90 95
Asn Ser Tyr Ser Tyr Val Trp Ile Gly Leu His Asp Pro Thr Gln Gly
100 105 110
Thr Glu Pro Asn Gly Glu Gly Trp Glu Trp Ser Ser Ser Asp Val Met
115 120 125
Asn Tyr Phe Ala Trp Glu Arg Asn Pro Ser Thr Ile Ser Ser Pro Gly
130 135 140
His Cys Ala Ser Leu Ser Arg Ser Thr Ala Phe Leu Arg Trp Lys Asp
145 150 155 160
Tyr Asn Cys Asn Val Arg Leu Pro Tyr Val Cys Lys Phe Thr Asp
165 170 175

<210> 110
<211> 175
<212> PRT
<213> Bos taurus

<400> 110
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Cys Leu Met Leu Leu Ser Gln Ile Gln Gly Glu Asn Ser Gln Lys Glu
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Leu Pro Ser Ala Arg Ile Ser Cys Pro Ser Gly Ser Met Ala Tyr Arg
35 40 45

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Ser His Cys Tyr Ala Leu Phe Lys Thr Pro Lys Thr Trp Met Asp Ala
 50 55 60
 Asp Ile Ala Cys Gln Lys Arg Pro Ser Gly His Leu Val Ser Val Leu
 65 70 75 80
 Ser Gly Ala Glu Glu Ser Phe Val Ala Ser Leu Val Arg Asn Asn Leu
 85 90 95
 Asn Thr Gln Ser Asp Ile Trp Ile Gly Leu His Asp Pro Thr Glu Gly
 100 105 110
 Ser Glu Ala Asn Ala Gly Gly Trp Glu Trp Ile Ser Asn Asp Val Leu
 115 120 125
 Asn Tyr Val Ala Trp Glu Thr Asp Pro Ala Ala Ile Ser Ser Pro Gly
 130 135 140
 Tyr Cys Gly Ser Leu Ser Arg Ser Ser Gly Tyr Leu Lys Trp Arg Asp
 145 150 155 160
 His Asn Cys Asn Leu Asn Leu Pro Tyr Val Cys Lys Phe Thr Asp
 165 170 175

<210> 111
 <211> 175
 <212> PRT
 <213> Rattus norvegicus

<400> 111
 Met Leu His Arg Leu Ala Phe Pro Val Met Ser Trp Met Leu Leu Ser
 1 5 10 15
 Cys Leu Met Leu Leu Ser Gln Val Gln Gly Glu Asp Ser Pro Lys Lys
 20 25 30
 Ile Pro Ser Ala Arg Ile Ser Cys Pro Lys Gly Ser Gln Ala Tyr Gly
 35 40 45
 Ser Tyr Cys Tyr Ala Leu Phe Gln Ile Pro Gln Thr Trp Phe Asp Ala
 50 55 60
 Glu Leu Ala Cys Gln Lys Arg Pro Glu Gly His Leu Val Ser Val Leu
 65 70 75 80
 Asn Val Ala Glu Ala Ser Phe Leu Ala Ser Met Val Lys Asn Thr Gly
 85 90 95
 Asn Ser Tyr Gln Tyr Thr Trp Ile Gly Leu His Asp Pro Thr Leu Gly
 100 105 110
 Gly Glu Pro Asn Gly Gly Gly Trp Glu Trp Ser Asn Asn Asp Ile Met
 115 120 125
 Asn Tyr Val Asn Trp Glu Arg Asn Pro Ser Thr Ala Leu Asp Arg Gly
 130 135 140
 Phe Cys Gly Ser Leu Ser Arg Ser Ser Gly Phe Leu Arg Trp Arg Asp
 145 150 155 160
 Thr Thr Cys Glu Val Lys Leu Pro Tyr Val Cys Lys Phe Thr Gly
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170

175

<210> 112
 <211> 175
 <212> PRT
 <213> Mus musculus

<400> 112

Met Leu Pro Pro Thr Ala Cys Ser Val Met Ser Trp Met Leu Leu Ser
 1 5 10 15
 Cys Leu Met Leu Leu Ser Gln Val Gln Gly Glu Asp Ser Leu Lys Asn
 20 25 30
 Ile Pro Ser Ala Arg Ile Ser Cys Pro Lys Gly Ser Gln Ala Tyr Gly
 35 40 45
 Ser Tyr Cys Tyr Ala Leu Phe Gln Ile Pro Gln Thr Trp Phe Asp Ala
 50 55 60
 Glu Leu Ala Cys Gln Lys Arg Pro Gly Gly His Leu Val Ser Val Leu
 65 70 75 80
 Asn Ser Ala Glu Ala Ser Phe Leu Ser Ser Met Val Lys Arg Thr Gly
 85 90 95
 Asn Ser Tyr Gln Tyr Thr Trp Ile Gly Leu His Asp Pro Thr Leu Gly
 100 105 110
 Ala Glu Pro Asn Gly Gly Gly Trp Glu Trp Ser Asn Asn Asp Val Met
 115 120 125
 Asn Tyr Phe Asn Trp Glu Arg Asn Pro Ser Thr Ala Leu Asp Arg Ala
 130 135 140
 Phe Cys Gly Ser Leu Ser Arg Ala Ser Gly Phe Leu Lys Trp Arg Asp
 145 150 155 160
 Met Thr Cys Glu Val Lys Leu Pro Tyr Val Cys Lys Phe Thr Gly
 165 170 175

<210> 113
 <211> 174
 <212> PRT
 <213> Rattus norvegicus

<400> 113

Met Leu Pro Arg Val Ala Leu Thr Thr Met Ser Trp Met Leu Leu Ser
 1 5 10 15
 Ser Leu Met Leu Leu Ser Gln Val Gln Gly Glu Asp Ala Lys Glu Asp
 20 25 30
 Val Pro Thr Ser Arg Ile Ser Cys Pro Lys Gly Ser Arg Ala Tyr Gly
 35 40 45
 Ser Tyr Cys Tyr Ala Leu Phe Ser Val Ser Lys Ser Trp Phe Asp Ala
 50 55 60
 Asp Leu Ala Cys Gln Lys Arg Pro Ser Gly His Leu Val Ser Val Leu
 65 70 75 80

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Ser Gly Ser Glu Ala Ser Phe Val Ser Ser Leu Ile Lys Ser Ser Gly
85 90 95
Asn Ser Gly Gln Asn Val Trp Ile Gly Leu His Asp Pro Thr Leu Gly
100 105 110
Gln Glu Pro Asn Arg Gly Gly Trp Glu Trp Ser Asn Ala Asp Val Met
115 120 125
Asn Tyr Phe Asn Trp Glu Thr Asn Pro Ser Ser Val Ser Gly Ser His
130 135 140
Cys Gly Thr Leu Thr Arg Ala Ser Gly Phe Leu Arg Trp Arg Glu Asn
145 150 155 160
Asn Cys Ile Ser Glu Leu Pro Tyr Val Cys Lys Phe Lys Ala
165 170

<210> 114
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lectin-C type
domain sequence

<400> 114
Glu Ser Lys Thr Trp Ala Glu Ala Glu Leu Ala Cys Gln Lys Glu Gly
1 5 10 15
Gly His Ala His Leu Val Ser Ile Gln Ser Ala Glu Glu Gln Ser Phe
20 25 30
Val Val Ala Phe Leu Thr Ser Leu Thr Lys Lys Ser Asn Thr Tyr Ala
35 40 45
Trp Ile Gly Leu Thr Asp Ile Asn Thr Glu Gly Thr Trp Val Trp Glu
50 55 60
Gly Trp Glu Thr Asp Gly Ser Pro Val Asn Tyr Thr Glu Asn Trp Ala
65 70 75 80
Pro Gly Glu Pro Asn Asn Arg Gly Asn His Gly Gly Asn Glu Asp Cys
85 90 95
Val Glu Ile Tyr Thr Asp Thr Asp Phe Leu Ala Gly Lys Trp Asn Asp
100 105 110
Glu Pro Cys Asp Ser Lys Leu Pro Tyr Val Cys Glu Phe
115 120 125

<210> 115
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 115
 ctggttgtag gttgccatgg t 21

<210> 116
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
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 sequence

<400> 116
 cagcttcggtt ggcacaggcc tctc 24

<210> 117
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 <213> Artificial Sequence

<220>
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<400> 117
 ccagtataag ctgacctttg acaaag 26

<210> 118
 <211> 21
 <212> DNA
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<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 118
 ctggttgtag gttgccatgg t 21

<210> 119
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 119
 cagcttcggtt ggcacaggcc tctc 24

<210> 120
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<220>

<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 120
ccagtataag ctgacctttg acaaag 26

<210> 121
<211> 22
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<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 121
ccaaggtttt agctgtggat ct 22

<210> 122
<211> 24
<212> DNA
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<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 122
acatccactg cctggaagac cctg 24

<210> 123
<211> 22
<212> DNA
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<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 123
cacatttcac actcagctct ga 22

<210> 124
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 124
caggagcatt tcgtgaaaga 20

<210> 125
<211> 26
<212> DNA
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<220>
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 ttttgacact ttatctgcag cctttg 26

<210> 126
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 <400> 126
 tttaacccga gcttcctcat 20

<210> 127
 <211> 22
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 ctgcaaaatc ttacgacttt gg 22

<210> 128
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 <400> 128
 caacaaacaa tggctacatc aaatttagca 30

<210> 129
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 <223> Description of Artificial Sequence: PCR Primer
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 <400> 129
 atgacactca gcaaacctga gt 22

<210> 130
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<212> DNA
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<220>
 <223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 130
 ctgcaaaatc ttacgacttt gg 22

<210> 131
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<220>
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 caacaaaca tggctacatc aaatttagca 30

<210> 132
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 <212> DNA
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<220>
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<400> 132
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<210> 133
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<220>
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<400> 133
 ctgcaaaatc ttacgacttt gg 22

<210> 134
 <211> 30
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<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 134
 caacaaaca tggctacatc aaatttagca 30

<210> 135
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<220>
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<210> 136
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 136
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<210> 137
 <211> 30
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<220>
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<400> 137
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<210> 138
 <211> 22
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<220>
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<400> 138
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<210> 139
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<220>
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<400> 139
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<210> 140
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<220>
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<400> 140
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<210> 141
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<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 141
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<210> 142
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<220>
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<210> 143
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<220>
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<400> 143
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<210> 144
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 <212> DNA
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<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 144
acagtcgaga ggaacacaca tc 22

<210> 145
<211> 22
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
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<400> 145
gaggacagct ttgatttcac tg 22

<210> 146
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 146
tggatttgat ccatttcctc tctacca 27

<210> 147
<211> 22
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<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 147
aagagactgg atggcttttc at 22

<210> 148
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 148
agccaagcag cagtgactac 20

<210> 149
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Page 273

sequence

<400> 149
accatccacg aggacatgct gtg 23

<210> 150
<211> 22
<212> DNA
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<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 150
aaatggcctt tcctggtatg ag 22

<210> 151
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<220>
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<400> 151
agccaagcag cagtgactac 20

<210> 152
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<220>
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accatccacg aggacatgct gtg 23

<210> 153
<211> 22
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<213> Artificial Sequence

<220>
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<210> 154
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
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<400> 154
 ctcataacag gaaaggccat tt 22

<210> 155
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<220>
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<400> 155
 agactccagg ggtcccctcg tct 23

<210> 156
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<220>
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<400> 156
 aggaaccagg tgccatttaa t 21

<210> 157
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<400> 157
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<210> 158
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<220>
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<400> 158
 gtggctacaa caccaccag tacgc 25

<210> 159
 <211> 20
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<220>

<223> Description of Artificial Sequence: PCR Primer sequence

<400> 159

acatagcagc accagtggaa

20

<210> 160

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer sequence

<400> 160

ctggcacccc tgctatactc

20

<210> 161

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer sequence

<400> 161

attccaagcc tcaggcacct ccaact

26

<210> 162

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer sequence

<400> 162

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<210> 163

<211> 21

<212> DNA

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<220>

<223> Description of Artificial Sequence: PCR Primer sequence

<400> 163

ctacgtggct ctggatgac t

21

<210> 164

<211> 23
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<220>

<223> Description of Artificial Sequence: PCR Primer
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<400> 164
 cctgccctca gccaggttcc tgt

23

<210> 165
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<220>

<223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 165
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21

<210> 166
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<220>

<223> Description of Artificial Sequence: PCR Primer
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<400> 166
 ggctcctgct gaccatattc

20

<210> 167
 <211> 26
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 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
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<400> 167
 catttacct ccaccatttc tcccag

26

<210> 168
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 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
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<400> 168
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20

<210> 169
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 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 169
 tgactttgaa cttgcagact tg 22

<210> 170
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 170
 cttgcaaadc acagatgaag gtctca 26

<210> 171
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<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 171
 aggcacaaag ggattgtaac tt 22

<210> 172
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 172
 ttctcaatga gtttggcagc 20

<210> 173
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 173

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aacctggact tcaaggctga agacca		26
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<p><220> <223> Description of Artificial Sequence: PCR Primer sequence</p>		
<400> 174 aaacctcaga acccctcctt		20
<p><210> 175 <211> 21 <212> DNA <213> Artificial Sequence</p>		
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<400> 175 agcctacgct gaagagttag c		21
<p><210> 176 <211> 26 <212> DNA <213> Artificial Sequence</p>		
<p><220> <223> Description of Artificial Sequence: PCR Primer sequence</p>		
<400> 176 aagccgaggt ctcaatataa tcctga		26
<p><210> 177 <211> 20 <212> DNA <213> Artificial Sequence</p>		
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<400> 177 acctgcaact tctcctcggt		20
<p><210> 178 <211> 22 <212> DNA <213> Artificial Sequence</p>		
<p><220> <223> Description of Artificial Sequence: PCR Primer sequence</p>		

<400> 178
gacgttggca tcttggtaaa ta 22

<210> 179
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 179
cgcagtattt cactcagctg tccgag 26

<210> 180
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 180
ttatgatgtc ccagagcttg tc 22

<210> 181
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 181
gttctgtgtg gtcataatc ct 22

<210> 182
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 182
caagaacctg cccatctact ctgaaga 27

<210> 183
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 183
cttgcccttg tacatttcca

20

<210> 184
<211> 22
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 184
caattgcctc cagtatttga ac

22

<210> 185
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 185
ttgcagacat agggtaacct cacatt

26

<210> 186
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 186
agcatttctg aggtggaaag a

21

<210> 187
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<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 187
ggatccagaa ttctgcaaaa tcttacgact ttgg

34

<210> 188
<211> 37
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<220>
 <223> Description of Artificial Sequence: PCR Primer
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<210> 189
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<210> 190
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 <223> Description of Artificial Sequence: PCR Primer
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 <400> 190
 ggaggccaca ggagcaggat ca 22

<210> 191
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 <400> 191
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<210> 192
 <211> 34
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 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: PCR Primer
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<210> 193
 <211> 34

<212> DNA
 <213> Artificial Sequence
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 <223> Description of Artificial Sequence: PCR Primer
 sequence
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 ggatccagcc ctggccaggc cgtgtgcaac ttcg 34

<210> 194
 <211> 34
 <212> DNA
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 sequence
 <400> 194
 ctcgagtgtg ttccccgggc tgggggcagg ctgc 34

<210> 195
 <211> 26
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 <223> Description of Artificial Sequence: PCR Primer
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 <400> 195
 atgtctgtgg ccatggtaga gtcagg 26

<210> 196
 <211> 27
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 sequence
 <400> 196
 atcatgaacc tcaactcctc aggaacc 27

<210> 197
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 <223> Description of Artificial Sequence: PCR Primer
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 <400> 197
 caagagcagg tttgagatgt tctc 24

<210> 198
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 198
 ccaaggttga ccacctccat

20

<210> 199
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 199
 atctacggag tccctttggc cacataa

27

<210> 200
 <211> 27
 <212> DNA
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<220>

<223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 200
 tccaaatgtc agaatatcga ggttccc

27

<210> 201
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 201
 ccgcctgtgt tccatggctt

20

<210> 202
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 202
 gtcattctgc tgccggttgg tag

23

<210> 203
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 203
 ccatggccct gccaaagtga tctt 24

<210> 204
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 204
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<210> 205
 <211> 35
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
 sequence

<400> 205
 aagcttgaag aaccccagag ggaactgccc tctgc 35

<210> 206
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 206
 ctcgagcaat tgcctccagt atttgaactt gc 32

<210> 207
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 <212> DNA
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<220>
 <223> Description of Artificial Sequence: PCR Primer
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<400> 207
gcacttgaag agctgtcata gc 22

<210> 208
<211> 22
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 208
taccctgagt ctcttgattc ca 22

<210> 209
<211> 26
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
sequence

<400> 209
ctctatgact gccagcaaat cacacg 26

<210> 210
<211> 3260
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (3171)
<223> Wherein n is A, C, G, or T

<400> 210
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